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PUBLISHED BY

EMG EXPRESS MEDIA GROUP A DIVISION OF
EXPRESS PUBLICATIONS PTY LTD
ACN 057 8087 904, UNDER LICENCE FROM
EP INVESTMENTS PTY LTD ACN 003 109 055
ALL RIGHTS RESERVED 2 STANLEY STREET, SILVERWATER NSW 2128, AUSTRALIA
PH: (02) 9741 3800 FAX: (02) 9748 1956
WEBSITE: www.expresspublications.com.au

DISTRIBUTED BY:

NETWORK SERVICES
66-68 GOULBURN ST SYDNEY NSW 2000

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NO REST FOR THE WICKED

Phew – finally caught my breath! Putting together every issue of 4WD Action is a mammoth task, especially considering we put out an issue every three weeks. But this one takes the cake I reckon – largely because I just calculated it, and we've done something in the realm of 20,000km over the past six months in researching and preparing this issue. No wonder the beancounters keep giving me dirty looks when I rock up with a stubby cooler full of fuel receipts eh?

If you're anything like me, you're always dreaming of where to go next. Doesn't matter if the finances or the calendar won't allow it for months - that doesn't stop that desire to get behind the wheel and just drive. This issue, we've definitely satisfied that desire in putting together one of our most comprehensive features we've ever done. We've enlisted the country's leading camping experts to let you in on the hard-learned tips and tricks that they rely on every time they go bush. Doesn't matter if you're just starting out camping or you have been rolling out a swag for years, you're bound to learn something from this incredible feature!

And as if that's not enough, take a look at where else we went this issue. From the Simmo to Tassie, and the High Country just to shoot custom 4WDs, and workshops everywhere up and down the east coast. I had a bit of a feeling we'd gone further than normal this issue, but it wasn't until we sat down and figured out EXACTLY where we went, that we realised we'd put enough kays on the clock to warrant four oil changes.

Right, now we've got the mag together and I'm about to hit the big red PRINT button (after reading everything for a fifth time), I'm thinking it's time to head bush. Maybe up the coast for a couple of days this time. After all, we've got three weeks until the next issue's due, that's heaps of time...

Catch ya on the tracks!
Cheers!

Brendan

Brendan Seymour
Editor



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POSTIE'S PICK PRIZE

Feeling dull? We've got the solution for your lighting problems. Thanks to Hansa, this issue the winner of the 'Postie's Pick' prize will score themselves a set of these brand-new, super-bright 220mm halogen lights from Hansa's new XXX range. With an adjustable beam, blue covers, 100W Osram Xenophot globe and stainless fittings, the XXX lights are sure to brighten up any track. How do you get your greasy hands on a set? Simple – send us a letter that shows you're as bright as the XXX lights!

Email your letters and photos to 4wd@expresspublications.com.au with 'Readers Write' in the subject line, or post them to Readers Write, Australian 4WD Action, 37 Carnarvon St, Silverwater NSW 2128. Remember to include your full name and the suburb or town you live in.

LETTER OF THE MONTH WINNER

NEW LEASE ON LIFE

I was introduced to 4WD Action five years ago in 2009 when I was recovering from a severe spinal injury. My mate Griffio brought a box full of magazines and DVDs to the hospital after my second lot of surgery to give me some inspiration and hope to get better. After reading the mags and devouring the DVDs during my recovery period of three years I ended up buying my first 4WD in 2012, a 2009 ZD30 GU Patrol. It was stock standard and I bought it at the auctions. I have since put on a bullbar and snorkel, 2in lift kit, BFGoodrich all terrains, cargo barrier, roof rack, awning and shovel / high lift jack holder. I have also chipped the Patrol and installed a compressor to reinflate the tyres at the beach. All I have to do now is throw in my double swag for when we camp at Bribie Island. I still suffer from chronic pain due to nerve damage so I am unable to cope with long

trips. I can only sit for short periods of an hour tops, so we mainly go to Bribie Island for a sand fix. When we are up at our family's farm at Conondale we go to the Conondale National Park or out to Boonah too. It has been five years since my injury and I am hoping in the next few years to get back up to Fraser Island. I used to go 4WDing and fishing with my mates every year for ten years but haven't been since my injury. I also hope to take my two girls and wife across to Moreton and Straddie as well, pending on my recovery. I have never given up and 4WDing has given me a purpose to keep on fighting. I am so grateful to Griffio for reigniting my 4WD passion and to my mates for keeping me positive when life was getting me down!

Attached is a picture of me and my Patrol in the Conondale State Forest taken recently. I only work 16hrs max a week but save all I can to get more goodies on my Patrol! (4WD Supacentre has enabled me to get a lot of items for the Patrol I wouldn't have been able to afford normally).

Thankyou to all of the team at 4WD Action for keeping me inspired through your DVDs and stories. I look forward to every issue!

Craig English
Samford Valley, QLD

Craig, I'm bloody glad to hear we could be of some small help while you were off your feet mate! And excellent to hear that the back's on the mend. Keep the chin up, keep polishing that Patrol of yours and you'll be back out there before you know it. Onya mate – hope to catch you around a campfire for a beer one day. There's a set of XXX driving lights heading your way, I'm sure you will put them to good use.

Brenno



ENGINEERING INSIGHT

I read the recent letter titled TRITON NO GOOD in edition 225 and thought I would add some information. I work in manufacturing as an engineer and up until about 2009 Toyota and Mitsubishi were considered the yard stick in manufacturing that many manufacturing companies measured themselves against and aspired to. This is because they introduced a system to ensure manufacturing quality that was called 5S. The 5S system focused on quality as being of the utmost importance and meant that they could consistently deliver on customer expectations within budget.

Unfortunately companies like Toyota and Mitsubishi have been unable to deliver on a long term sustainable platform under 5S. The problem with Toyota & Mitsubishi has been the involvement of third party suppliers, and their inability to deliver on the 5S mantra as they do in Japan.

Think about how many recalls you have heard Toyota involved in in the last five years – probably five times as many as you would have heard of in the previous ten years. 5S is a great system, but by choosing to involve third party suppliers many companies like Toyota or Mitsubishi are affecting their reputation, build quality, with increases in faulty equipment and unreliable machinery. It is a shame that they are struggling to follow their own mantra.

It was a great system to work by but it is a lot of work to maintain. Initially Toyota wanted to prove a point because 5S was in its infancy. They proved the point and that's where it started losing momentum.

Just for the record I have a Great Wall X240 and it is a great truck, I have done Fraser, Cameron Corner and the Dingo Fence. \$21K, 82000km on the clock and happy as Larry.

Glen Evans, via Email



Thanks for writing in Glen, a very unique and interesting bit of perspective!

Overall both Toyota and Mitsubishi build mostly quality bits of gear – I've owned plenty of both, though they've been a lot older than what we're talking about here. Whether or not a vehicle has faults is one thing – they're incredibly complex bits of machinery and are bound to have the odd bug here or there – but a true mark of a good manufacturer is how they stand by their product with warranty support. In this case it sounds like Mitsubishi are doing right by the owner which is a refreshing change from some of the horror stories we've heard relating to some manufacturers. Great to hear you've been having a good run with your Great Wall too. Thanks again for writing in, this is great info that I want to pass on to our readers.

Branno

Got a tricky tech question that you can't get answered? Different mechanics or mates telling you different things? Maybe you're not sure if you're getting the sales answer or a real one. Just email us a detailed description of your problem to editorial@4wdaction.com.au and we'll enlist our panel of the top industry experts to answer your questions. It's advice you can trust, every single time, and it's a service we're offering free to you as a reader of 4WD Action.

BAD VIBRATIONS

I have a 2003 GU Patrol TD42Ti coil ute that I've only had for a month, no lift yet. It's running 33in KM2s on Nissan steel rims. I've noticed sometimes doing around 80-100km/h on the highway I get a pretty bad vibration through the vehicle and can also feel it through the steering wheel. Looking around on forums it seems quite common but everyone has their own opinions like drive shafts, unbalanced wheels or clutches. I rebuilt my hubs and replaced wheel bearings last weekend but it's still there, thinking it could be my wheels aren't balanced?

Jacob De Marchi

Mud tyres can go out of balance due to damaged tread, or mud build up from off-roading so definitely get them looked at as it shouldn't cost you much and can be done fairly quickly by your local tyre shop. Then, work through a process of elimination. Firstly I'd check the caster angle and bushes to ensure correct diff angle and position. Generally a 2in lift will need 2° caster, a 4in lift will require around 4° of caster. Secondly, check that your steering damper is functioning correctly. You can check this by jacking up your 4WD and turning your wheels left to right – make sure there is no binding or sticking. If you remove the damper, compress and



extend it with your hands and make sure there is smooth resistance in both directions. Add those options to your troubleshoot list and hopefully you'll come out on top!

Brad Green

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ISOLATOR OR CHARGER, WHAT'S SMARTER?

I have a new BT50 and am looking at doing a dual battery set-up. Everyone seems to be running with a DC-DC charger on these new utes. I asked an auto electrician at work about them and he says there is no need to run one unless you're charging long distances to counter the voltage drop. He says all I need is a Redarc isolator and the smart alternator will work fine. Is this true or is there a reason everyone is running these chargers, or is it just a way for the sparkies to make a bit of coin?

Zac Scott

Hi Zac, your question about battery systems is a common one. The simple answer is this, we use DC to DC chargers because they can charge your auxiliary battery to 100% and a simple isolator of any type can't. Redarc's own specifications on their isolators are between 60% to 70% charge in the aux battery at most. This goes for every vehicle, not just the ones with the new style of smart alternators. The new style of alternators can actually make the charge percentage worse because of their low output voltage.

Tony Buckley

Adventure Auto Electrics

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TURBO TUNING TEMPERATURES

I have a 2000 HiLux with the 5L motor. It has a Mitsubishi DTS TD04L-13G part #49377-05110 turbo fitted. The motor has just been rebuilt and the exhaust temperature after the turbo reaches 650° on a long gentle slope, holding at 100km/h. I can't tow a small boat on the highway at 100km/h without having high exhaust temperatures. The boost is running at 10psi, there's no snorkel or intercooler fitted, water temperature is normal and additional temp measurements on the head are at 82° to 86°. On a prolonged range crossing it reaches 93°. A different EGT sender and measurement device was installed and it measures the same temperature. I am assured the timing is correct and the fuel pump is set correctly (by a fuel injection service specialist). It does not blow any smoke even when it is revved. Fuel economy is 15L per 100km whether towing or empty. How should the motor be tuned to ensure excessive temperatures are not reached? Would opening up the turbo outlet help in lowering the temperature and, or would it introduce other issues? Should boost pressure be increased, decreased or left at 10psi?

Allan Nutt

Firstly I'm assuming the EGT you mention is in Celcius? If everything is, as you state (that seems in a good state of tune), then you simply have to either lower the fuel loadings to lower the EGT or, if you want to keep those fuel levels then an Intercooler needs to be installed. The fuel loadings are set by a very inconspicuous, simple to adjust screw. It's very common to have this simple setting turned up a little more than normal. Whilst power is the fun side, the offset will be excessive loads and heat on an engine that wasn't designed for that. Keep it safer and it will last longer.

Andrew Leimroth

Berrima Diesel

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THE Who's WHO OF THIS ISSUE

Here's just some of the mechanical, off-road and adventure experts who have added their decades of knowledge to this issue of 4WD Action



DAVE COX: As owner and mechanic out at Mt Dare Station and recovery expert in the Simmo, Dave Cox has seen more desert break-downs than just about anyone west of Poeppel Corner. The crazy thing is he reckons the vast majority of trip-ending problems out that way can be avoided with some simple checks, which he'll let you in on, starting on page 63.



BROADY: Colin Broad's the editor of our sister publication Camper Trailer Touring, and along with his young family has spent more nights in remote campsites than just about anyone. This issue we pick his brains to find out his best-ever tricks for better camping – and we bet you haven't heard em before...



LINDA BLOFFWITCH: If there's a couple of 4WDers who know the Kimberley, it's Linda Bloffwitch. Linda and her partner Grant run tour company, My Aussie Travel Guide, and every year show 4WDers parts of the Kimberley that they've never seen before. This issue we asked 'em to outline the Kimberley in a nutshell for those first-timers dreaming of their own adventure – see what they rate as their top five towns.



BRAD GREEN: As the bloke behind Suspension Stuff, one of the country's biggest suspension retailers, Brad Green is a bloke who knows what he's talking about. Whether it's how to get your vehicle handling right, the proper way to lift any 4WD or just one of those tricky questions you can't get a straight answer to, Brad's your man. This issue he talks Patrol driveline vibrations, and how to diagnose that annoying shudder in our Ask the Experts letters page.



ADREW LEIMROTH: It's a question as old as turbos themselves – where do you fit your pyro gauge, and what's a 'safe' level? There's a whole heap of discussion about this very topic, so we've gone straight to the source to get it answered once and for all. Berrima Diesel's Andrew Leimroth has literally fitted hundreds of EGT gauges in his career, and he's got the one simple answer you can take to the bank.



MICHAEL HAYES: Mick from Superior Engineering's back again this issue, letting you in on more of the secrets the pros use to find the perfect suspension setup. With a team of engineers behind him, Mick's learned the hard way what works and what doesn't when it comes to suspension. It's the kind of knowledge only a lifetime in the trade will teach you, and he's sharing it on page 171. Not bad for \$9.95, eh?



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TO BRING YOU
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BIG BRUISER

It's lifted, locked, turbo'd,
intercooled and decked out with an
incredible camp setup. Could this
be Australia's ultimate 105 Series?

WORDS BY ADRIAN HODGSON PHOTOGRAPHY BY DAVE WOLTSCHENKO



REAL 4WD

2006 TOYOTA LANDCRUISER



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Sometimes it takes a few goes to really work out what works and what doesn't. These lessons tend to be expensive ones and can lead you down the path of endlessly chasing your own tail, fixing what breaks and modifying what doesn't. With a string of modified 4WDs behind them and a number of lessons learned, Mitch and Callie Harrison have customised this 105 Series 'Cruiser to tow, tour and 4WD just about anywhere

they could ever want to go.

"We had a Triton in 2007, a Bravo, and a Rodeo before the 'Cruiser," explains Mitch. "The Triton wasn't a bad little ute and was pretty good value. It did okay even though we had it loaded right up. It was the best bang for your buck of the three of them. The Bravo was not my favourite 4WD of the ones I've owned. I blew three front diffs in the Bravo and it was only on 32s!"

Mitch said he bought the 105 Series in mid-2013 and while he paid good money for it, it had

already had a long list of modifications carried out – the kind of stuff they were after to make it a capable tourer that could get to the places they wanted to see while towing the ski boat or dirt bikes. It didn't go entirely to plan though, as Mitch explains.

"When I first bought the 100 Series I wasn't impressed with its performance. It had an aftermarket turbo but it either hadn't been tuned properly, or at all. They'd just stuck the turbo on and not given any thought to the tune. The EGTs were too hot so I put a boost controller on it and brought it back under control. It was gutless so I took it to Denco Diesel in Wagga and they tuned it up, but then we knocked it back to about 115hp and 11psi as the intake temps were getting up there. I fitted a top mount intercooler with a thermo fan underneath it and turned the boost back up. It's good to drive now. We tow a ski boat with it while it's loaded right up and it still just keeps going."

"We did the Cape in it and that was pretty good. We didn't have any problems. We went up into Coffs for a couple of days too. We've done a fair few High Country trips but the Cape was the best. Lockhart River back through the Frenchies... we did the Tele Track and it handled it well. It didn't break anything so that was great."

"We're gonna do Tassie at one point and I'm keen to get up and do the Watagans and Yalwal, but the

High Country is every long weekend at the moment because it's only two hours away. I think the mag and the DVDs are good for inspiration on what to do to your truck and where to take it. It helps with the trips that we want to do. You see something on the DVD and you want to try that out. You've got to get out there and use these things. There's no point sitting at home. Sometimes it feels like there's just not enough hours in the week to get out there and use it all."

When it's not towing the boat or 4WDing through the High Country, this 'Cruiser is Callie's daily driver. Locked, lifted, loaded and ready for anything, Mitch told us that Callie was right at home in the driver's seat of the 'Cruiser when they visited the Cape. "She loved it when we were up there. She was flat-out through the gullies and I was saying 'slow down', but she loved it. I said, 'Righto, I'll buy you a little run-around to get around town', but she said she'd rather drive the 'Cruiser, so that's that."

Mitch told us that future plans include a front locker to match the one already fitted to the rear as well as tougher CV joints and a set of 35in tyres to match, explaining that, "They're never really finished, are they? As an example, it wasn't until we did the Simmo trip with the 4WD Action guys that I realised I needed a freezer. You're always doing things to them and upgrading stuff to make them more capable."



**LOCKED,
LIFTED AND
READY FOR
ANYTHING**

REAL 4WD

2006 TOYOTA LANDCRUISER



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025

EXTERIOR

The Old Man Emu shocks at each corner and airbags in the rear do a fine job of supporting the heavyweight 'Cruiser until it reaches its destination, at which point the rest of the fitout kicks into action. There's not one, but two pull-out awnings fitted to the custom roof racks of the 105, which also store a set of Maxtrax and a heap of other gear that doesn't fit into the well sorted rear compartment. With aftermarket steel bars protecting it on all sides and a heap of extra lights to shine the way, this 'Cruiser has everything it needs to go well off the beaten track. Throw in a couple of fridges, all the recovery gear you can carry and amenities like the hot water shower setup and it's got enough of everything to stay out for a month at a time!

Air tank keeps a reserve for activating lockers on demand as well as reinflating tyres



Hot showers in the middle of nowhere? No problem!



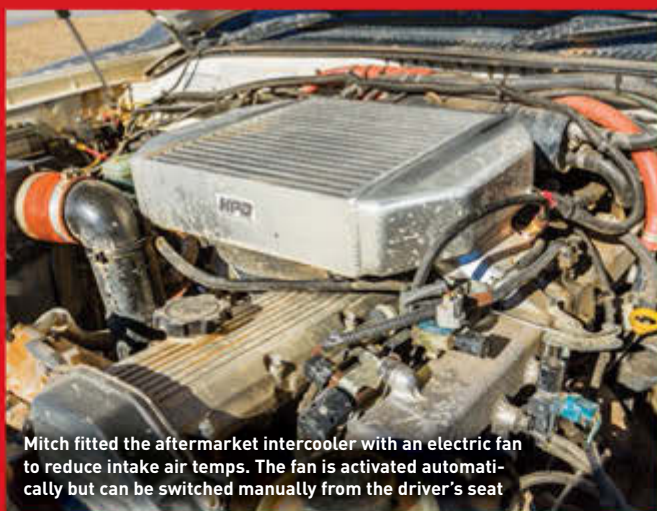
SUSPENSION, DRIVETRAIN & ENGINE

While the suspension of the 105 had been modified long before Mitch and Callie first bought it, that didn't mean it was sorted. The combination of poorly matched components worked together to make the vehicle unstable. In short, it had the lift but it didn't have any road manners.

"It was all over the joint to begin with," explains Mitch. "I re-did the caster by fitting replacement bushes in the front end, but the main thing I found that helped was extending the sway bar links by about 50mm. Before this you used to be flat-out keeping it on the road, but now it's a much better tourer and every-day driver."

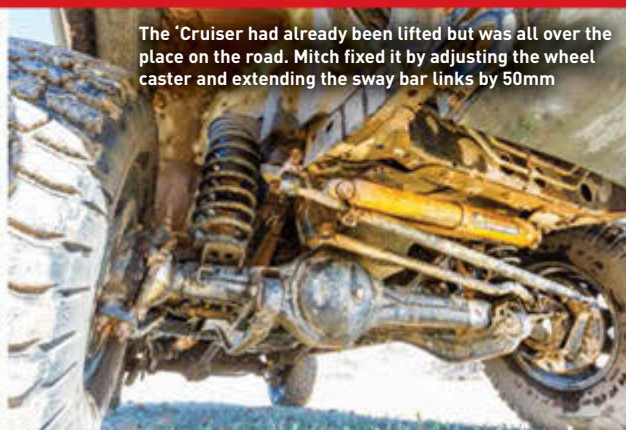
Thankfully, other dramas have been limited with Mitch saying he put a new clutch in while the transmission was out being rebuilt. The engine breathes a little easier now thanks to the 2.5in exhaust upgrade, but with the retune and intercooler now sorted there's not much to do in that department. Mitch says that the fuel economy sat at about 17L/100km before the tune, but even that's not too bad considering the weight is up there at 3.5T. There's plenty of diesel on board in any case thanks to the Long Ranger 160L fuel tank that takes the place of the spare wheel beneath the rear of the vehicle. While the engine and transmission side of things is now as the owners want them, the rest of the driveline may well cop an upgrade or two in the future.

"I'd like to fit a front locker to it as it could do with some help every now and again. I'm upgrading to 35s so I'm carrying spare CVs and I'm basically just waiting for the diff to blow. When it does I'll fit another ARB air locker and we'll be good to go."



Mitch fitted the aftermarket intercooler with an electric fan to reduce intake air temps. The fan is activated automatically but can be switched manually from the driver's seat

The 'Cruiser had already been lifted but was all over the place on the road. Mitch fixed it by adjusting the wheel caster and extending the sway bar links by 50mm



INTERIOR

One of the first changes we noticed when we looked inside the driver's compartment was the addition of two analogue gauges to the dash fascia. We didn't recognise the brand but the install looked neat so we asked what the story was.

"They're just Ebay cheapies," Mitch laughs. "There's a boost gauge and one for EGTs. To begin with I thought the EGT gauge was reading incorrectly because it was showing higher temps than I expected, but when I had the tune checked it turned out that the gauge was spot-on and the engine was actually running quite a bit too hot."

The rest of the cabin is fairly typical of a daily driver turn weekend warrior with a Black Widow glove box tidy making up some space that the small Waeco takes up sitting between the front seats. There's the usual GM radio and Hema GPS combo but the other end of the truck is where the action is.

The 'Cruiser was fitted with a basic drawer system by the previous owner but like the suspension upgrades they weren't up to scratch and lacked a little functionality – something that Mitch set about fixing himself.

"The whole thing just works together how it's all set up. I put a few dividers in the drawers to make little storage compartments here and there which made a big difference. It was all there before but it was all really basic. Now it's more usable for how I want to have it and the more practical layout actually fits a lot more stuff."



Cold drinks anywhere. Perfect!



Mitch has customised the drawer system with dividers and pockets that neaten things up and has also added a fridge slide

Mitch's biggest fan is under the bonnet. Sorry mate, someone had to say it!



**IT'S GOT ENOUGH OF
EVERYTHING TO STAY OUT
FOR A MONTH AT A TIME**





RUNDOWN

VEHICLE: 2006 Toyota LandCruiser

ENGINE: 4.2L diesel six-cylinder

GEARBOX: Five-speed manual

SUSPENSION:

FRONT: Old Man Emu shocks

REAR: Old Man Emu shocks

TYRES: BF Goodrich KM2

WHEELS: 16in steel

OTHER GOOD GEAR: ARB steel winch bar, steps and rear bar, custom brush bars, custom roof racks, Warn 9500lb winch, ARB air locker, 2 x IPF spotlights, 32in 55w light bar, 50in 55w light bar, Redarc dual battery system, EGT and boost gauges, GME TX3320 radio, Hema GPS, drawer system, ARB 60L fridge, Waeco 6L fridge, 160L Long Ranger fuel tank, 45L water bladder, ARB air compressor, 9L air tank, Bushranger hot water shower system

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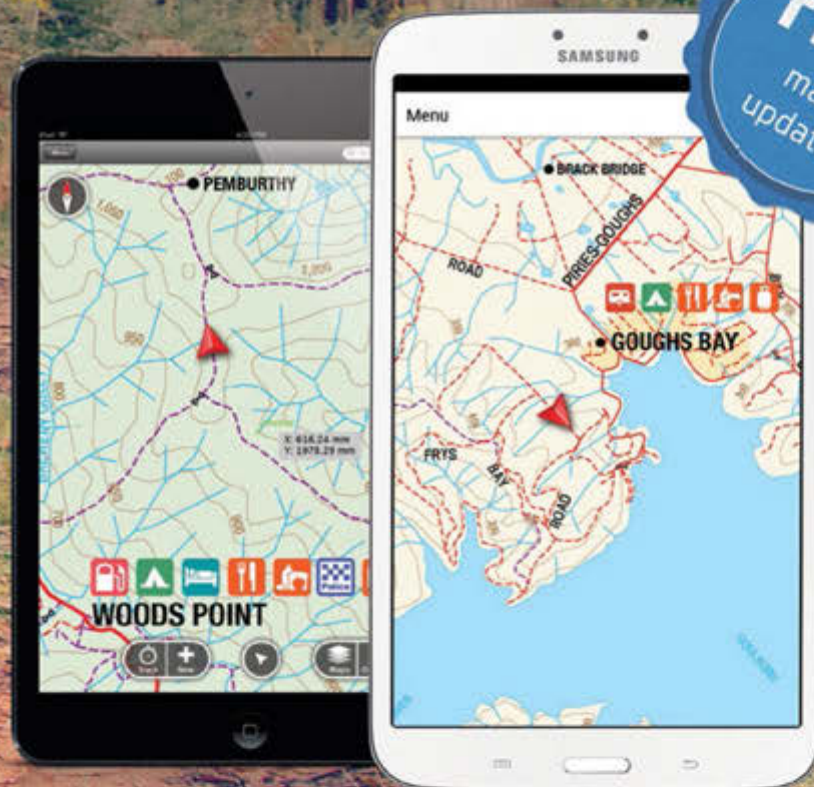
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CAMPING MADE SIMPLE!

WORDS BY DANIEL REBER AND BRENDAN SEYMOUR PHOTOGRAPHY BY 4WD ACTION →

- How to cut the camping gear you need to carry in half
- Ways to win back space inside your 4WD
- Simple tricks for making camping hassle-free
- The best multi-use items to keep in your 4WD
- How to save time, effort and money, and get out in the bush more!

OUR PANEL OF CAMPING EXPERTS!

With a combined 150+ years of camping experience between em, these 4WDers know a thing or two about living life less cluttered off-road.



DAVE COX

At the drop of a hat, our Simmo Desert correspondent Dave Cox has to be ready to head into the middle of the outback to perform mechanical repairs or vehicle recoveries. He's the king of low-impact, lightweight camping and he knows what does and doesn't cut the mustard on a camping trip.



RAY CLARK

By now you'll be pretty familiar with our Cape York correspondent Ray Clark and his pair of big 80 Series Cruisers. Living in Weipa means Ray's got some of the country's best camping at his doorstep, and he's learnt more than a thing or two about camping – especially in the wet – both up in Cape York, and on an epic round-Oz trip he took to get there.



LINDA BLOFFWITCH

Straight from the red dirt tracks of the Gibb, are our Kimberley correspondents Linda Bloffwitch and Grant Hanan. They run My Aussie Travel Guide, and have been taking 4WDers to the most remote parts of the Kimberley longer than just about anyone. They've even published multiple books on the Kimberley, and have one of the most sensational camping setups that we've ever come across...



GRAHAM CAHILL

Over the last decade our very own Graham Cahill's travelled right around Australia once a year on average. He's worn out more swags, billys and camp lights than just about anyone, and he's done almost all of it from the back of a shorty GQ. In other words, the bloke's all about the bare essentials, purely out of necessity...



It's amazing how much you can do with minimal gear - downsize your collection!

learning those beautiful little tricks of the trade that the pros use. And that's where we come in this issue. We've enlisted the 4WD industry's camping experts, those adventurers who have made a living out of rolling out a swag, from tour guides to destination experts. What's more, we've then added in a whole bunch of regular, everyday Aussie families who have done the Big Lap with kids, to find out their secrets for successful camping trips. It's a combined 150+ years of off-road expertise, and it's all

here in this issue.

The logic is sound. The simpler you make your camping experience, the more you'll go camping. And the more you go camping, the more you'll refine your camping experience, doing away with the things you never use. Then, all of a sudden, you've got your campsite setup down to five minutes, packing away takes not much longer, and you're taking a single box of gear away each time. You're now camping like the pros, and it starts with this article! 🚐



HAYLEY WILSON

When it comes to remote touring with the whole family, Camper Trailer Touring columnist Hayley Wilson has done more than most. She and her husband Glenn have practically raised their children out on the tracks, and have visited everywhere from the wild beaches of Esperance right up the WA coast to the Pilbara, Broome and the Kimberley.



COLIN 'BROADY' BROAD

Broady's the editor of our sister publication Camper Trailer Touring, and along with his wife and daughters has put some serious touring kays on his big Patrol and camper trailer. If there's someone who knows the little tricks it takes to get your entire family out in the bush without taking a road-train of gear, it's this bloke!



MIRELLA ATHERTON

Having travelled with her family everywhere from the NSW outback to the Western Australian coast, Camper Trailer Touring travel writer Mirella Atherton has seen just about every corner of Australia. She's done more camping with the whole clan than just about anyone, and has learnt more than a few tips and tricks along the way.



Less time setting up means more time around the fire

PACK SMARTER, NOT HARDER!

Any camping trip starts with packing the 4WD. Pick up a trick or two from the pros on how to make packing a lot easier



Spare some extra thought on how you pack your truck

PACK SMARTER

"When packing the 4WD, make sure you've packed in such a way that you've got access to the things you'll require first when you hit camp. For example, if you're expecting to arrive late at camp and setup for dinner in the dark, then make sure all your pantry and cooking gear is at the back of the 4WD. Not only does this let you get to it all faster at night, but it's also packed away, ready for quick access for breakfast the next day." - Hayley

BE SPACE CONCIIOUS

"A fair few people ask me how I get away with a short wheel-base vehicle when out on the long distance trips. It's simple. I make the most of the space I have and buy my gear accordingly. I don't carry enormous tents, fridges larger than I need and spares that I'll never be able to use anyway. I also make use of 'dead' areas in the 4WD. Dash storage, under the seats, above my head - it's amazing how much wasted storage space there is inside your 4WD." - Graham

4WD TETRIS

"Have a system to how you pack your 4WD. Not all of us are lucky enough to have a full-blown storage system in the back of our wagon or ute, so, the good old plastic tubs from Bunnings with the clip on lids are a perfect way to store the gear you will need for your adventure." - Ray



DAN'S TIP

For more years than I care to remember the main storage 'solution' in the back of the Patrol was as simple as a half-a-dozen milk crates. I used each crate to store different gear and never had issues finding the stuff I needed. Crates stack neatly, don't take up much space and are extremely sturdy. Another vote for the humble crate; chop the base out of one and bolt a toilet seat to the edge for a quick and portable dunny!

PRACTICE

"To pack more efficiently, lay everything out to determine how it will get packed and unpacked before your trip. More importantly, practice your packing technique to ensure it's right and always pack the 4WD during daylight hours." - Linda

KEEP YOUR PANTRY STOCKED

"By keeping your pantry permanently stocked with all the basic cooking ingredients and utensils, you'll really only need to stop for meat and beers when heading off on your trip. This one tip will save you a stack of time and money each time you head away and by having an organised pantry box you'll set up for meals much faster." - Mirella

SHARE THE LOAD

"Whenever you're travelling with mates, sit down over a beer and plan your packing so that there's no doubling up on gear. You don't need two chainsaws, 4 eskys, 14 camp chairs for 8 people or a half a dozen bottles of coolant for a weekend away. By sharing the load between everyone, you'll all come away with a heap more space and less weight over the axles." - Ray

INVEST IN A WATER BLADDER

"If space is at a premium inside your 4WD then a 100L poly water tank in the rear cargo area is going to be a no-go. Instead, look into a water bladder. There are tough 'bags' that hold large amounts of water and can be stored anywhere from nooks and crannies in the rear drawers, to under seats - basically anywhere you want." - Ray

**THIS ONE TIP
WILL SAVE YOU
A STACK OF
TIME AND
MONEY!**

MAKE THE MOST OF YOUR ESKY

"If you don't happen to have a 12V fridge then you can actually make a bit more sense of your cooling setup. Instead of having an esky packed with party ice, freeze a dozen or so water bottles and pack them around the food and drinks in the esky. Not only does that keep everything cool for longer, but it also means you've got ice cold water for drinking once the bottles start to melt." – Ray

SMARTER PACKING

"The items you need to get to on a daily basis should be easily accessible, so put them in drawers and side pockets. Use soft sided bags for packing clothing which can act as fillers when squashed to help minimise any movement of your gear. Aim to have a couple of days' meals in a small tub easily accessible, and use square containers, avoiding round or tapered shapes to minimise wasted space." – Linda

BONUS TIP

WATER STORAGE

We all know the importance of drinking water on a trip away. A tip here is to stuff a whole bunch of smaller water bottles in to all the gaps, nooks and crannies around your 4WD. They'll only take up otherwise useless space and you'll always have a backup of water bottles stashed around the 4WD.

CULL YOUR LOAD

"Every third-or-so camping trip, take note of the gear you haven't touched. If it's not emergency related then ditch it. You'll free up space, save weight and make the packing process a whole lot easier." – Graham

ORGANISERS

"Using seat back organisers, map pockets and dash storage helps to make the most of otherwise useless space. You'll find it's usually the smaller items that tend to end up causing most of the mess inside the 4WD. If you've got a place to keep all these bits and pieces then you'll end up with a tidier, more efficient setup." – Hayley

QUICKER CAMP SETUPS!

Everyone's got that one mate who's still there at 9pm trying to setup camp. Avoid being that camper, with our expert tips!

**YOU'LL BE
AMAZED HOW
MUCH TIME
YOU SAVE**

Quick access to your gear means faster setups and easier camping

GET IT DOWN TO AN ART

"If you've been driving all day and hanging for a coldie, you'll want to get set up in no time. Speed up the process by taking a stepped approach and before you know it, it's routine. Get yourself some velcro and strategically place it on poles, tent walls, and parts of the 4WD that allow for things to be attached. Use a permanent pen to mark poles so you know exactly what height they need to be the next time you set up, and leave guy ropes at the correct length when packing away. You'll be amazed how much time you save." – **Linda**

FAST FOOD

"A guaranteed time saver is to pre-cook your meals a few days earlier and freeze them. Buy some tin foil containers from the local supermarket to put the meals in, and then it's as simple as dragging some coals out of the fire and placing the containers on them to reheat your cuisine!" – **Ray**

QUICK TENT

"If you're the kind of family that regularly does quick overnights or couple weekends then it might be worth investing in a rapid setup tent. They do cost a few quid to buy, but save you a heap of time in the long run and ultimately make each getaway quicker, easier and more pleasurable for all." – **Ray**

DAY LIGHT SETUPS

"Daylight setups are definitely quicker so plan your days so you drop anchor in the afternoon. Sometimes we don't unhitch the trailer from the four wheel drive at all – we set up and pack up and then keep going. Get into a routine of making sure everything is securely tied down and tyre pressures are on target every morning. You'll find you get much further and get much more done if you pull over early and get going early the next day." – **Mirella**

PEGS AND ROPES

"Keep three or four extra guy ropes and a bag of pegs somewhere easily accessible, like under the driver's seat. When the weather turns bad, you don't want to be pulling your vehicle apart searching for extra ropes or pegs." – **Graham**



QUALITY LIGHTING

"Now this one might seem obvious, but the amount of campers I've seen trying to set up camp with little more than a head torch in the dark astounds me. Spend a little money next time you're able and fit out your 4WD with some proper LED camp lights. It'll make setting up at night an absolute breeze and save a stack of time." – **Graham**

A SOLAR SHOWER

"If funds, space or setup times don't allow you to have a fully plumbed camp shower, then fear not; there's no need to suffer the effects of the 'five-days-in-the-bush cologne'. A solar shower bag can roll up into a tiny package and be stored almost anywhere. A few hours before hitting camp, fill the bag with water and throw it on the roof. You'll be surprised how long of a shower you'll get out of one." – **Ray**

KEEP SOME GEAR HANDY

"Have your insect repellent or wet weather gear in easy reach so that you can use either if required, meaning you can get on with the setup if you are getting eaten alive or a downpour is in progress. There's nothing worse than pulling up at camp in the rain and having to pull half the 4WD apart to get to your wet weather clothing – keep it accessible." – **Broady**

ROOF TOP TENT TIP

"There's a surprising amount of space in the average rooftop tent that people rarely take advantage of, and why wouldn't you? It's waterproof, padded and can store all your bedding in the tent itself. Depending on their size, you can even squeeze a few camp chairs under the PVC cover" – **Graham**



SHAUNO'S TIP

Duct tape! It sounds simple but keep a roll in the centre console. Fix broken tent poles and flies, position LED lights, repair chairs and tables, keep your over-talkative, Nissan-driving mate quiet, the works.



BE FLEXIBLE

"Sometimes having a little extra gear at home is what you need to be able to adapt to different camping situations. If you're heading off with a mate for a really quick overnighter, then ditch the rooftop tent in favour of a swag or quick tent. Likewise if you're off for a long weekend with the better half, then a tent or rooftoper is the way to go. Having the right gear for the right occasion inevitably makes setting up much quicker. Don't pack a tent that requires an engineering degree to assemble if you're on your own – catch my drift?" – **Dave**

BLOW MOULDED TABLE

"Instead of wasting money buying the 'camping' tables with 18 legs and hinges and 35 parts that all go round, just grab yourself a cheap, fold-in-half table from the local hardware and you're sorted. Sure, they may take up a little more space than the compact camp tables, but they're also much bigger and easier to assemble. Lie it flat on your roof rack for transport and pack your other gear on top." – **Ray**

DRINK LAST

"As tempting as it is to get stuck into a few cold beers when you land at camp, delay the pleasure and get set up first. Not only will that spur you on to get done quicker and more efficiently, but I don't know about you, but I'm bloody useless at setting things up after a few ales!" – **Graham**

BONUS TIP

If you're heading out in potentially wet conditions and still fancy a few beers by a roaring fire, then get yourself a plastic tub from bunnings and fill it with smaller bits of timber packed tightly along with some kindling. Once you reach a soggy campsite, you'll be the camper with a roaring fire while everyone else is trying to dry twigs with a 12V hair dryer.



SIMPLE FAMILY CAMPING TIPS, FROM FAMILIES WHO'VE BEEN DOING IT FOR YEARS

Get the kids out bush more often, without causing more work for yourselves



Camping as a family can be easy and hassle free

NO MORE RUMMAGING THROUGH THE 4WD LOOKING FOR BOTTLES OF SUNSCREEN AND TOWELS!



KIDS BOXES

"Have a couple of kid specific boxes in the 4WD. For example we carry a 'swimming box' in the back seat with all the kid's towels, sunscreen, hats and cossies packed, ready to go. If we pull up at a swimming hole, just grab the whole thing out and off you go – no more rummaging through the car looking for bottles of sunscreen and towels." – Hayley

LOCATION, LOCATION, LOCATION!

"Think about where you set up to camp. Take into consideration the wind direction, how much protection you will have from the morning sun before your campsite becomes a hot-house, and what position you personally like or prefer. Get this right and you'll feel like you are in the best campsite in Australia and the kids will be much more comfortable and relaxed." – Broady

QUICK CLEANUP

"Invest in a whole stack of takeaway containers and prepare more complex snacks and roadside lunches in these. Once the kids have had their fill, it's as easy as lobbing the whole thing in the trash – no cleanup, no mess, no worries." – Hayley

HAVE AN ITINERARY

"Have a plan on what you want to do before you arrive at your destination. Whether it's for the kids or the entire family, occupying them from the start means that you can enjoy yourself and stop looking over your shoulder every 5 seconds to find out what they are doing." – Broady

PRIOR PLANNING

"If you're facing a big day in the driver's seat with the kids in the back, then it's a wise idea to spend a few extra minutes at camp the night before prepping the kid's lunches and snacks. This means you can haul into a rest stop for lunch and actually have a break yourself rather than prepping meals and dealing with clean-ups." – **Hayley**

FIRE SAFETY

"Although we all love a big roaring fire, if you've got especially young kids you might be a little apprehensive about letting them get too close – rightfully so. You don't want to can the fire all together, so why not take along a fold up brassier? Add some sticks, marshmallows and just a little bit of adult assistance and the kids will be over the moon." – **Broady**

MAKE THE MEMORIES LAST

"Camping with our parents is one of the fondest memories most of us have so make camping special by having family oriented games that revolve around the camping experience, and leave the electronic gear at home! Better still, create a family tradition; have a meal that's cooked only when camping – you'll be amazed how they'll remember that for life." – **Linda**

KEEP IT CLEAN

"Set up a rubberised perforated floor sheet inside your annex or tent if it doesn't have a floor or even outside of the annex entry, as this will allow grass, sand and water to fall off before traipsing it into your camper trailer, plus it's nice to walk on. If the kids are in their own tent, chuck some inside as it'll keep them and their sleeping area clean." – **Broady**

GET 'EM INVOLVED

"Kids love to get involved, just as much as any other family member. Have the kids and the better half sort all of the light and easy stuff, allowing you to come along and tackle the canvas quickly and without delays. By having the kids help around the campsite, you're actually teaching them to become proficient campers themselves – skills that they will one day pass on." – **Broady**

KID'S GEAR

"Let's face it; kids require a lot of extra gear, so plan exactly what it is that they'll need depending on where you're heading. Don't take their bikes if there's not really anywhere to ride or if there are other activities that will occupy them. Give the kids a headlamp and a few little bits of camping gear each, this not only entertains them but helps them be more independent and get accustomed to camping as adults." – **Dave**

DAY-TRIP PACK

"Pre-pack a backpack with a few basics so you're always ready for a day trip. Toilet paper/tissues, matches, a water bottle, muesli bars and sunscreen are always handy. When you pull up at your destination, throw in your handheld GPS (if you're doing a hike), grab the extra water bottles and you're set to go." – **Hayley**



TRAV'S TIP

At the end of the day, nothing is more important than making sure your family is safe when out in the bush. One thing I would recommend to any parent is to spend the short amount of time to get a first aid certificate and invest in a high quality first aid kit.

Even if the additional space means you miss out on that small box of Lego, it'll be worth it in the peace of mind you gain.

BONUS TIP

Just as you would do at home, have all of the kid's toys packed into a snap lock crate. This'll ensure everything is in its place and there are no tantrums from lost toys!



PACKING UP MADE EASY

It's the end of the trip, and it's time to head home.
Here's how to ensure it's a 20 minute job, not an hour



The less you pack, the less you pack up - remember that

TEAM WORK

"Packing up after a big few days can be a drag, so do it progressively over a longer period rather than leaving it to the last minute. Aim to have dedicated storage solutions so things can be packed away once finished with avoiding double handling. Allocate a person to a packing "zone" which is an area that is the responsibility of that person to pack only. It's important that before leaving your campsite, take a good look around the campsite for a final check to ensure all jobs have been completed and you and your vehicle are ready to go." – Linda

BBQ WIPES

"Sensational! Buy 'em from the hardware store where they're typically \$3 for 12 instead of the supermarket where they're \$5 for 8. One wipe can wash up an entire night's cooking – start with the cleanest items first like cutlery, then finish with the pots and pans. You'll not only save a stack of time, but your water will last you a heck of a lot longer." – Graham



LOSE THE RUBBISH

"Make an effort to get rid of your trash in a garbage bin before you get home. Just in case you end up getting in late, you're not left with stacks of rubbish in the back of the 4WD overnight. Most major campsites have rubbish dump points, however if not then haul into the first roadhouse and see if there are some dumpsters out the back – ask first." – Linda

WATER-PROOF TUCKER BOX

"Get one! Keep all your cooking gear in it and it's ten seconds to get it out of the vehicle instead of rummaging through your drawers. Another cracking use here is to throw all your dirty cutlery into one and soak in some soapy water to make for an easier clean up." – Graham

RECOVERY GEAR STORAGE

"Grab yourself a couple of sand bags from a hardware store – the hessian type with a plastic liner. Throw any filthy recovery gear, clothes and shoes into these bags and throw them up on the roof with the bag securely closed." – Ray





MATT'S TIP

I always carry two heavy-duty plastic bags in my truck, and bring them out when it's time to go. In one I throw all my dirty clothes, beach towels, and anything else that needs washing. I don't

separate the muddy socks from last night's bog hole and the sandy beach towel – just throw them all in together and let a machine 'heavy-duty' wash sort them out later. Then I collect anything and everything else from around camp that got dirty during the trip, and throw it in the second bag. Plates, cups, cutlery, gas cookers, chopping boards – the lot. I put all that in the other bag and seal it so it won't smell.

SHADE CLOTH

"Carry a length of shade cloth to use as a ground tarp under your swag or tent. Keep it somewhere handy so you can bung it down on the ground before you roll your swag out. The cleaner the swag stays, the easier it'll pack up." – Dave



BONUS TIP

WINE CASK BAG

We're not advocating that you go out and deliberately drink a cask of wine purely for this tip, however it'd be rude to waste good wine so take that as you will. A humble wine cask bag is one of the greatest multi-use items you can carry. They can function as an emergency pillow, driver's lumbar support in the seat and even be used when packing the 4WD. Jam the bag down the side of a storage container and lightly inflate it till it compresses the rest of the gear in there. It'll stop rattles and provide some much welcome padding.

10 ESSENTIAL BITS OF GEAR YOU NEED IN YOUR CAMP SETUP

It's good to have all the gear you need but aside from emergency gear, don't go overboard, only take what you need

CAMP OVEN

"The humble camp oven can account for a dozen bits of cooking gear and is a real jack-of-all-trades piece of kit. Depending on the exact style of oven you use, the lid can be used as a bush frypan, the base can boil water, cook rice, steam veggies as well as the usual raft of meals that can be cooked. If you're looking to minimise your gear, then get familiar with your camp oven!" – Dave

CHAINSAW

"A once off investment in a chainsaw will save you stacks of cash in the long-run over buying bags of wood. Not only that, but you're not storing all that wood in your 4WD from home as you're just cutting what you need, right where you need it." – Graham



Chainsaws will save you time and money in the long run

CAST-IRON FRYPAN

"Cast iron cookware's the ultimate – bung it straight on the fire and you've got yourself a hot surface to cook tucker. One good heavy-duty frypan's all you need – spend a little extra initially and you'll have something you'll camp with for decades. Look for one with a cast handle." – Graham

GOOD QUALITY KNIFE

"This might be the inner boy scout coming out in me, but as a camper, a 4WDer, a fisho and a hunter I reckon a good outdoor/camping knife's as useful as they get. We're not talking machetes or pig-stickers here, just something small enough to keep in your console, with both serrated and flat edges." – Graham

A large tarp is one of the most versatile things you can carry in your camping kit

LED HEAD TORCH

"Definitely one of the best inventions of the past 10 years. I've bought and used em all – from the \$5 4WD show specials, to the \$100 you-beaut ones. They all work well, and they all get lost just as easily, so I reckon buy in at the lower end of the scale first, and think about upgrading later." – Brenno

A QUALITY TARP

"Whether for shade or rain shelter, a large quality tarp can keep everyone in your convoy dry and free to move around at camp. Forget about taking the Shangri La of dome tents, it'll only take up a tonne of space and be a burden to set up and pack away – especially if wet. Strung between a few trees, the humble tarp can provide quick and easy shelter as well as taking up bugger-all space in the 4WD." – Ray



BBQ PLATE

"It's just too easy to throw a bbq plate over some coals and have a perfect cooking setup ready to go. They don't cost much, can pack flat almost anywhere and are pretty darn easy to clean – you'd be crazy not to get one." – Mirella

FORGET ABOUT TAKING THE SHANGRI LA OF DOME TENTS

BONUS TIP

If you're planning a big – and we mean big – trip like a Simpson crossing, or the Cape, then consider going away for a weekend, packed exactly as you would for the bigger trip. This dress rehearsal will let you spot any planning issues or packing problems before you hit the road on your dream adventure.

BLOCK SPLITTER

"If you're talking simplifying, and multi-use items, you can't go past a block splitter. They aren't designed to chop wood, but that's what your chainsaw's for. You'll need to split the rounds you cut with the chainsaw into nice useable bits, and in a pinch can be used to drive pegs into hard ground if you don't have a hammer." – Brenno

AWNING

"I tell ya what, after being fairly late to fitting an awning, I wouldn't be caught dead without one these days. Doesn't matter if it's stinking hot or pouring rain, they're awesome bits of kit and so quick to setup." – Shauno

FIR LIGHTERS

"Carry a small box of fire lighters in a waterproof container or in a sealed plastic bag. They're the perfect thing for getting a fire going when your kindling is a little damp." – Dan



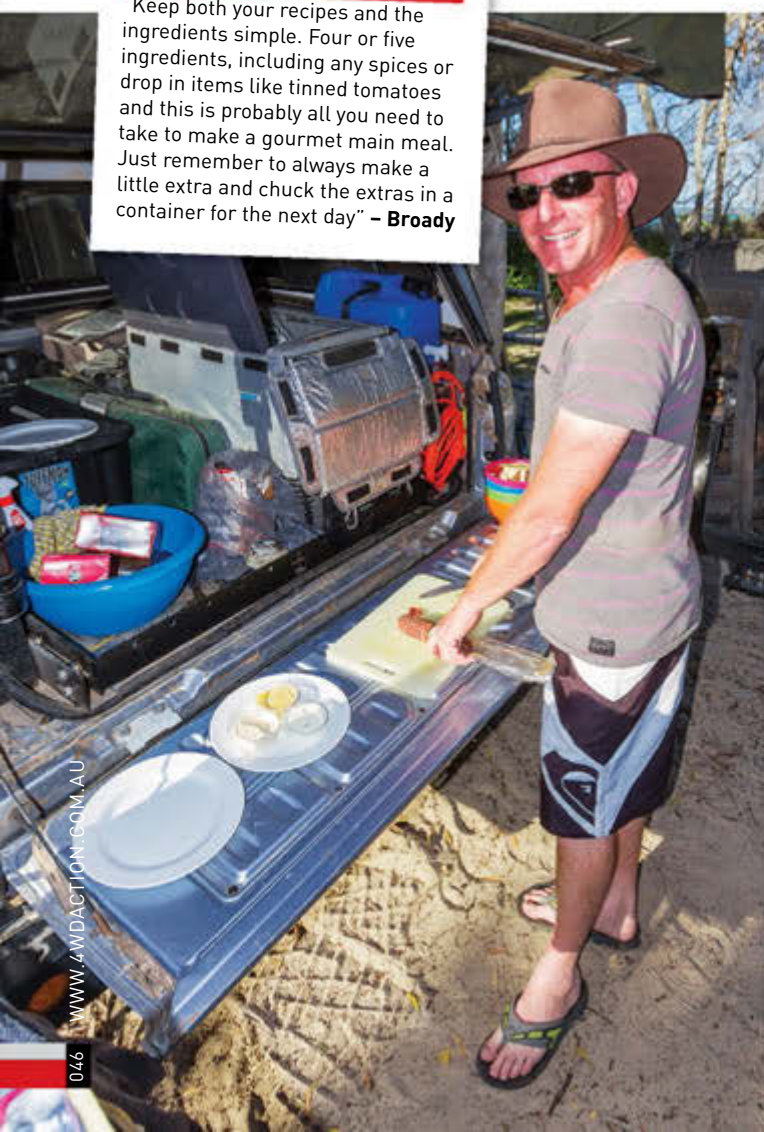
EASIER TUCKER ON THE TRACKS!

Forget burnt snags – becoming a bush master chef is way easier than you think



KEEP IT SIMPLE

"Keep both your recipes and the ingredients simple. Four or five ingredients, including any spices or drop in items like tinned tomatoes and this is probably all you need to take to make a gourmet main meal. Just remember to always make a little extra and chuck the extras in a container for the next day" – **Broady**



TAKEAWAY TUCKER

If you're not the Masterchef type, why not buy some take away meals, freeze and cryovac them? You can even use some leftovers from home frozen and packed in the fridge. Defrost the satchels by placing them in your fridge which will also keep other food items cooler in the process. Imagine pulling up to camp, heading up a few leftover meals and then chucking out the containers – dinner doesn't get much easier than that!" – **Linda**

FLAT PACKED COOKING

"There's a lot to be said for the good old fashioned BBQ plate, just a simple flat plate is one of the best things to cook on, you can always find some rocks to prop it up on, or dig a hole and make a makeshift fire hole with the plate on top of it, you could even get fancy and fab some clip in legs up, so that it all folds flat and saves space. When you're knee-deep in the mud, it can also double as an emergency jack-base." – **Ray**

MEAL PLANNING

"Make yourself a meal planner and try to mix up your meal types. Having the same thing repeated for four weeks will definitely wear thin quick!" – **Linda**

OVER-CATERING

"Food is something that most people over cater for. I've seen so many people carry enough food for twice the amount of time that they're away. The result of this is the risk that it can spoil, as well as the extra weight and space that it takes up. Pre-prepared or cooked meals can make it a lot easier at dinner time especially if you've had to travel late into the day. It never hurts to carry a few canned meals and instant noodle sachets, just in case things don't go to plan for dinner." – **Dave**

THERMAL COOKERS

"Thermal cookers are awesome with a short prep and pre-heat time, and then sit it on the back for a few hours and when you get to where you are going you are ready for dinner. All you basically need to do, is get the meal going in the morning as you would normally cook it, then once it's hot, throw it all into the thermal cooker and don't look at it again until it's dinner time." – **Broady**

CRYOVAC

"To have your meat last longer, ask your butcher to cryovac your meat or invest in a machine yourself. They're becoming really popular and you can use this same technique for meals you prepare before travelling. Dishes such as curries, pasta sauces, and casseroles work a treat." – **Linda**

CREATIVE ALTERNATIVES

"If you're going to go to the effort of cooking when camping, you might as well aim to get value for your effort. Plan ahead and make enough for at least two meals. Cooking a roast one night can easily become lunch the next day and bubble and squeak for dinner the day after. Most of us love our dessert, but fruit doesn't always stay fresh for long when camping. To pacify that sweet craving, take some dried fruits/nuts and some tinned fruit, as they travel well and can be used as a snack or used in both savoury and sweet dishes." – **Linda**

LESS IS MORE

"The less you take, the less can break, lose or have to clean. Keep it simple – don't over-complicate things. 99% of what you want to cook, can be done with a camp oven, a frypan, a set of tongs, a knife and a spatula. The rest is just showing off." – **Graham**

ALUMINIUM FOIL

"Aluminium foil is the camp cook's best mate – keep a spare roll in the drawers or the back of the car. If you forget everything else, you can make a one-use frypan out of it, or just roll your tucker up and sit it on some coals. Some foil also serves to keep your seconds warm while you plow through the main course." – **Ray**

KID PLEASER DESSERT!

Here's a recipe that could become a family camping favourite with the kids. It's easy, the kids can do it and it's got chocolate – need more?

INGREDIENTS

- 1 packet Waffle Cones
- Bananas
- Mini marshmallows
- Peanut Paste
- Milk Choc Bits

METHOD

- Peel and slice the bananas into small chunks.
- Spread some peanut paste on the inside of the cones.
- Layer some banana, choc chips and marshmallows in each cone. Repeat until reaching the top of the cone.
- Wrap the cones in foil individually and place over hot coals for 5-10 minutes, turning occasionally.
- Unwrap to check it's all melted to perfection, and you're good as gold!

BONUS TIP

A cheap tool roll from is the perfect accessory for storing cutlery, cooking knives and general utensils. They come in all shapes and sizes and roll up small enough to stuff in just about any gap in the 4WD. If you've got a drop-down rear table, use a couple of tonneau elastics to secure it to the backside of the table, ready to go in an instant.

The BBQ plate can do it all – get one in the back of your 4WD now

CANNED FOODS FOR THE WIN!

"Think outside the square with canned veggies – everyone knows a can of peas and corn boiled on some coals works, but bung a couple of tins of mushies in butter sauce over any sort of meat for a seriously good bit of tucker." – **Graham**

LET SOMEONE ELSE DO THE WORK

"Visit your local butcher for some pre-prepared meals such as marinated meats, prepared dishes of goulash or stews, plus a whole raft of others available. Cryovac them and simply cut the bag open at dinner time, pour it in a pot, give it a quick cook or heat up and you're done. Use paper plates and almost everything except the pot can go straight in the bin." – **Broady**

USE THAT FIRE

"Most people know that you can cook pretty darn well on a fire, however most never bother. It all comes down to heat control. A small pile of coals can cook almost anything to perfection and leave bugger-all to clean up." – **Ray**

REMOTE PRODUCE

"Often when traveling remote, it's hard to get and store fresh produce so you need to improvise. You can substitute most fruit and veges with tinned produce and bread can be swapped for flat-breads, rice cakes or even better make your own!" – **Linda**



BETTER WAYS TO STORE BULKY GEAR!

Cut down on what you've got to carry, by making the most of all available storage space

BONUS TIP

One tip for cutting weight and bulk out of the majority of your trip is to only fill long range fuel tanks, water tanks and jerry cans once you get close to your destination. There's no point travelling from Sydney to Birdsville carrying 200L of fuel, 100L of water and 3 jerry cans the whole way, when there's a servo every 100 kays most of the way there.

As a general rule, keep bulky gear high, and heavy gear low

UP TOP

"Utilise roof racks economically and safely – if items are light, use tie downs such as ratchet styles with hooks. I like to use tarp "socks" I've made. They're dust and waterproof being made out of a cheap tarp sewn on three sides and used for anything placed on the roof rack that I want protected from the elements." – Linda

CAMPER TRAILER STORAGE

"If it is heavy like a high lift jack or a tool kit we usually try and put it in the trailer and pack it lower down and secure so it won't move. We take a swag for the kids and although it is not heavy it travels better when packed in the camper trailer because it doesn't block our access to what we need. Depending on whether the bulky items are dirty you've always got the option of storing them in the camper trailer storage box to separate them away from your other clean gear. Either way you can wrap anything dirty in an old towel to keep it separated. That way you can put bedding on top if you need to." – Mirella

WAGON STORAGE

"Now, in most instances you'll want to place most of your heaviest gear down low in the 4WD. The same goes for bulky bits and pieces. However, if you're looking like an after-dark setup, or you're just a lazy bugger that likes to get setup and into a chair as quick as possible, then keep things like swags and chairs easily accessible, either on the roof or near the back of the 4WD." – Ray

TAKE AN EXTRA FEW MINUTES...

"Storing bulky gear isn't always easy, and most of the time we just try and shove it in. It might fit, but it's not always effective, so try taking a puzzle approach. Put the item into a box that geometrically fits with other items so that it can then be packed better. Take a few extra minutes and plan where that gear is going to go. You may need to move items to get to it, but that's so much easier when it's not taking up a lot of space compared to being chucked in." – Linda

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Three very tough and very well built rigs, all driven daily and hard!



In the absence of a chain saw, grab as many blokes as you can and lift...

Despite having now done so a number of times, I always get just a tad nervous when Brenno throws me the keys to the company car and in his typically larrikin manner shouts, "Have fun, don't bend my baby!" Of course while I have never done much damage to a company car, there is always a first time. Likewise, I've never seen Brenno angry before but there is always a first time. I guess I had reason to be a tad more nervous than usual and not just 'cos I was in perhaps the cleanest (and most modern) 4WD I'd ever taken off road, but more because I was about to spend a few days out bush with the lads from Double Black Off-road (one look at that flaming Jeep tells you they don't muck around) plus a handful of readers who love nothing more than going nuts on tracks that would make a mountain goat stutter; yep it was a shaky start I don't mind admitting.

We've done a few readers trips this year and in all honesty, they have been an absolute blast, all of them. That shouldn't come as any surprise, I mean regardless of background or 4WD or home town, the common interest of the bush and exploring it by 4WD makes us all pretty similar. So as I pulled into the arranged meeting place (carefully I might add, Brenno was still fresh in my mind) the stoked grins on all the lads faces told me this trip would be just like the others. Over coffee from the small country town cafe we all did the obligatory tyre kicking that we are all guilty of when we get to check out somebody else's rig for the first time. The lads had come equipped, well equipped.

What really stood out from the moment I pulled into the carpark, was just how much work each of the boys had put into their 4WDs personally. I mean there were the usual off the shelf mods but for the most part, there was a large percentage of hands-on work done to an individual level on all the cars. Pete's GQ was the standout for me (yea ok, so I might be bias) with every bit of work done by Pete himself, all to an absolutely immaculate level. A real tribute to the bloke.



Don't let the neat lines on this 80 fool you, its one ultra capable bit of kit and it gets wheeled hard and often



Project GU is looking pretty gnarly these days yet its still a comfortable touring rig that Id happily jump in tomorrow for a hot lap of the island

To my mind, theres not much tougher than a GU coil sprung yoot and this weapon is a classic example



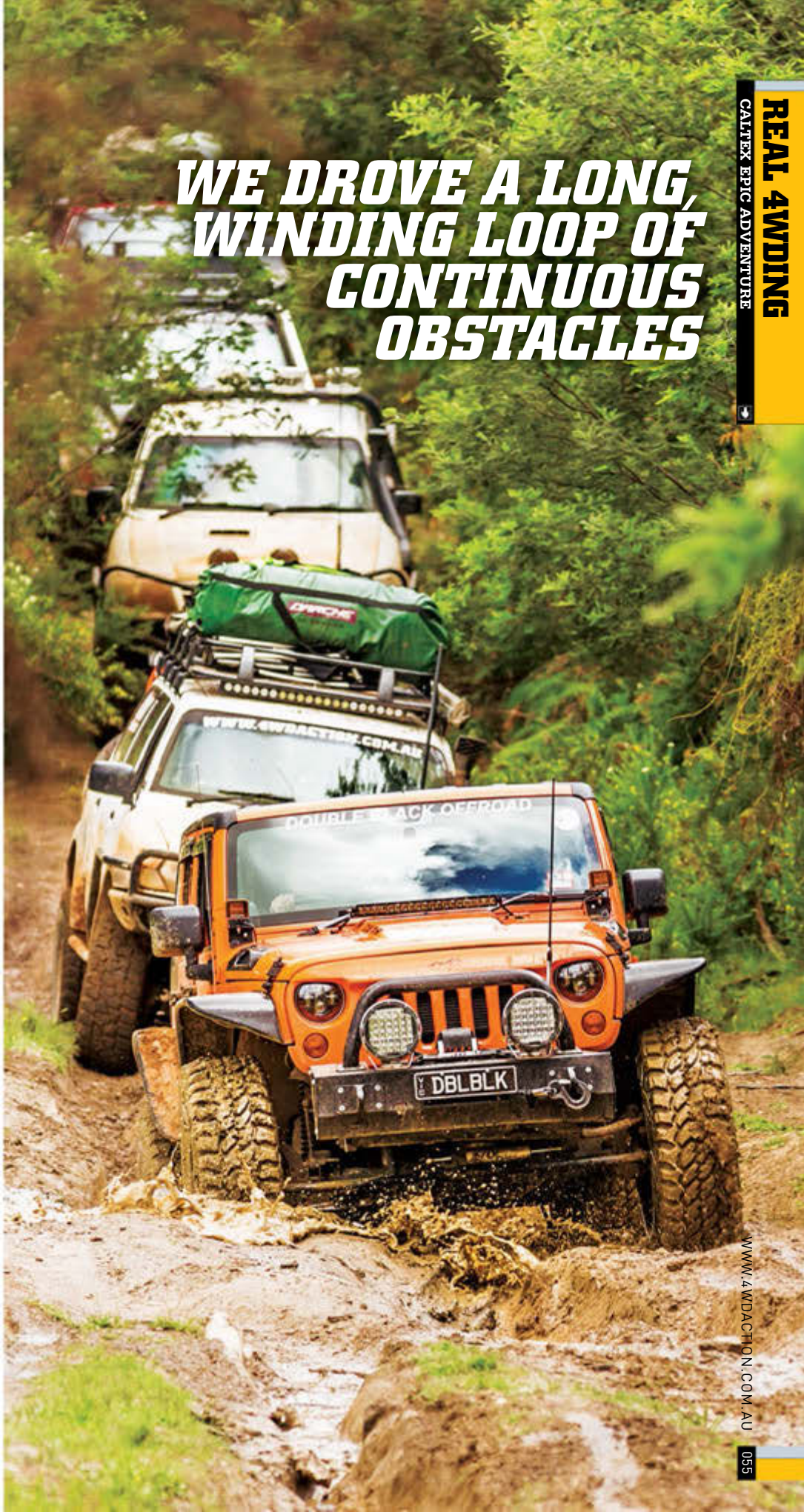
As I've written on many an occasion, day one of any DVD trip is always slow with a late start pretty much the norm. It took us a while to explain the filming procedure to the new lads, set up their in-car cameras and generally get things sorted. Of course all of this is done track side, with gear thrown in every direction in a sort of randomly ordered chaos that only works for us 4WDers. With everything mounted, buttons pushed and red lights glowing we performed a couple of practise runs before filming that opening scene and promptly getting into the business of airing down. Finally.

Now unlike so many trips I've done in the past, the regions we had planned to wheel hadn't seen rain for a very long time. So dry was the area in fact that the fire danger season had actually been brought forward by a whole month. The bush wasn't hiding this fact either, things looked real dry. This of course meant there was little chance we would encounter that one known good feature of a DVD trip; mud. However that wasn't all bad as the tracks we had in mind are gnarly enough in the dry, throw in mud and many become comp truck material. Speaking of tracks, that first day was downright good fun due to the fact that unlike so many hard 4WD tracks, where you drive a short tough section then head towards another short tough section, this day we actually drove a long, winding loop of continuous obstacles. It was actually very cool and something I haven't seen often.

Righto, here is a big juicy bit of behind-the-scenes info for you; the guide we had along for this trip was the very same guide we had for my last High Country snow DVD. None other than Mr Pickle. Pickle knows Victoria like a boss and is one of the nicest blokes you will meet. Unable to get away from work early, the plan had been for Pickle to catch us at camp that night so it came as no surprise when we heard him come over the UHF clear as a bell saying he was waiting at the top of Phone Track, keen as mustard! As the convoy scrambled its way to the top (there is a phone tower right at the very top, which I guess gives the track its name) Pickle greeted us all with warm handshakes and a few laughs.

By this stage it was getting late into the arvo with a camp scene still to be filmed. Now, right near the top of Phone Track, just after the tough section, is a cracking rock platform that juts out over the hill and from up top you get epic views right back towards the Melbourne skyline. This

WE DROVE A LONG, WINDING LOOP OF CONTINUOUS OBSTACLES





How filthy cool is that? Oh yeah and the Jeep looks pretty nice as well hey

is the sort of bush camping I love to stumble on and I was adamant that we head back down and spend the night on the rock with a view. Of course, it wasn't nearly as big as it looked from first glance and fitting five trucks plus swags was a bit of an effort but we got there in the end.

A night in camp with Pickle is always a fun one and more often

than not, a late one; this was no exception on both counts. I rate that camp highly, small campfire, great view, nice cool evening and a bunch of good blokes to share it all with. Those are the things I remember the most from DVD trips. Of course, sometimes the mornings are just a little dusty, if you know what I mean...

Bacon and eggs plus strong

black coffee fixes most things so despite a shaky start, the breakfast of champions had us all back in line and ready to rock nice and early. The plan for day two was to head south and tackle a bunch of tracks the lads (plus Pickle) knew of in the surrounding state forests. The majority of these areas get closed for the winter period which surprised me given they are not at elevation and would never receive any truly bad weather. I really didn't get the logic behind the decision to close tracks that are used ONLY by 4WD enthusiasts and never as public thoroughfares. If conditions get too gnarly for you and your rig, well surely it's up to you to decide to turn around or go ahead... am I wrong?

The one obvious difference between this area and the one we drove the previous day was just how much wetter this was.

Obviously we had moved just far enough into the mountains to receive a whack more rainfall such that even after a lengthy dry spell, there was a bit of surface water lying around. There were some seriously rutted tracks out this way, some so deep that the GU was actually below ground level at times. I can only imagine these would be off limits to all except those who care little for their trucks during the winter months.

Pickle had decided to leave Rocky Track till last thing. Weird bit of country that as the name implies; the track looks almost man made as the whole thing is comprised of small to moderate sized lumps of rock, the weird part is there are no rocks off the track. It honestly looks like a road from the Roman era. It's also bloody gnarly! Of course it doesn't help when you are well over loaded with camera gear, swags and baggage for four blokes. That poor old GU; I gave it a real hard time getting up Rocky but she just wasn't up to the task and I was very aware of Brenno and the concept of his face going red should I return with panel damage.

The locals in Vic say that if you don't like the weather, just wait



More flex than a sick giraffe



There wasn't much mud to be found due to the dry conditions so when we did happen on some soggy stuff, the lads made the most of it



If this campsite looks the goods in a photo, imagine how good it was in reality; especially as the sun set over the horizon with a fire crackling and a cold beer in hand...

THESE READERS LOVED GOING NUTS ON TRACKS THAT'D MAKE A MOUNTAIN GOAT STUTTER

REAL 4WDING
CALTEX EPIC ADVENTURE



It was right about here that I remembered what Brenno said when I grabbed the keys to the company GU

five minutes and with good reason, the place really is fickle. So really I wasn't the least bit surprised when that night's camp was a wet one. The rain absolutely pelted down out of seemingly nowhere and honestly didn't let up all night. Nobody loves packing up a wet camp but sometimes it just has to be done. So with canvas still soaked we did our best to get ship shape and out on the track.

In the dry, Strickland Spur Track is just about perfect; steep in sections, rocky and off camber

in others but with a deluge of the sort we had received the night before there were sections Pickle assured us would be a test. Once again, fully loaded the big GU struggled in spots but we eventually clawed our way to the top where I had really hoped we'd be greeted by solid views. Nope, couldn't see your hand in front of your face; complete white out. This whole mountain gets solid snowfalls in winter and it's one of the rare spots that you can in fact tackle in your 4WD in the snow on



This was one of the neatest and yet toughest Jeeps I've had the good fortune of wheeling with



Notice my swag way up high, in a water proof bag? There is a good reason for that...

a pretty regular basis. Now that's something I'd love to throw Shorty at! If you get a chance, go check that mountain out, it's a small slice of High Country including the classic Black Spur Inn, without the distances. With the weather doing its best to try and clear, we decided to head out towards Marysville and have a gander at a track that wasn't exactly a killer challenge but Pickle said it offered some epic views. Well, I have to say, I was thoroughly blown away. Our stills shooter was frothing at the prospect of getting a DVD cover slick as we all climbed back up that fire trail and Sam our cameraman had the drone out grabbing as much aerial footage as possible. I've covered the High Country pretty well over the years and I have to say that the small slice of track we did out Aeroplane Track way was one of the most spectacular I've ever done.

Keen to finish on a high, we decided to head out to one of the more impressive lookouts in the region, that being Kepple Lookout. Now what blew me away up there wasn't so much the view, although that was bloody good

but rather the fact that the little town of Marysville down below was at the epicentre of the horrendous fires that swept through the region several years before. As far as the eye could see, the bush was in recovery mode from having been utterly devastated, even the lookout tower was a new construction from the old which had been burned to the ground. Nature is an amazing beast but so too is man, with the residents of Marysville banding together to get their little community back on its feet after what was a terrible disaster.

This had been one of the shortest DVDs we have filmed, done in just a few days but that didn't take away any of the enjoyment. I was totally unaware of just how good the wheeling and scenery was, only an hour or so outside Melbourne. I think you would be hard pressed to find as good country on the steps of a capital anywhere else in Australia. I for one would be amped to head back, especially if I was offered an invite to tackle Strickland Spur after a solid dump of snow!



FACT FILE

WHERE:

Just over an hour north of Melbourne, we headed from Cobaw through Tallarook, Kinglake and Toolangi before finishing near Marysville.

CAMPING:

Bull Creek camp site in the Murrindindi Scenic Reserve is the pick of the bunch when you are near Toolangi, expect to pay about \$5 per 4WD per night. We stayed at free bush camps, the highlight being the top of Phone Track with fantastic views over Melbourne.

WHAT TO TAKE:

Make sure you have a winch. We don't recommend tackling these tracks by yourself so bring some mates along. Each of you will need a recovery kit as the tracks around here can be unforgiving – particularly if it rains. There should be mobile phone reception in most areas but be sure to have enough supplies to be self-sufficient in the event that weather changes, or break-downs cause issues.

BEST TIME TO TRAVEL:

Autumn or Spring offer the best weather and track conditions, but remember the weather down here can change rapidly, so be prepared for anything. Some tracks are closed between the Queen's Birthday and Melbourne Cup long weekends.

FUEL AND SUPPLIES:

Fuel and supplies are readily available in the towns between the National Parks,

ULP: \$1.29

DIESEL: \$1.35

TRIP STANDARD:

Trips are rated A through to E grade, with A meaning only suited to vehicles with an extreme level of off-road modification and E meaning perfectly suited to all types of 4WD vehicles. We rate these tracks from C to A grade, particularly in wet weather when even Strickland Spur and the other 'easier' tracks can be challenging.

MAPS AND GUIDES:

Hema Melbourne

RESTRICTIONS AND PERMITS:

There is no need for camping or driving permits in any of the areas we headed through, but remember that except for Cobaw, most of these tracks are closed between the Queen's Birthday and Melbourne Cup weekends. Also be mindful of fire bans as these areas are sensitive to bush fires.

CONTACTS:

PARKS VICTORIA

W: www.parkweb.vic.gov.au

PH: 131963

BLACK SPUR INN

W: www.blackspurinn.com.au

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10 MINUTE TRIP CHECKS



Prevent 90% of track-side problems with our ultra-easy, daily checklist!

WORDS BY DANIEL REEBER AND DAVE COX PHOTOGRAPHY BY DAVID WOLTSCHENKO

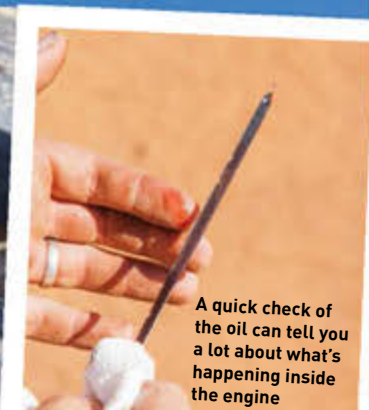




Any time we subject our 4WDs to off-road torture there is a chance of mechanical failure – period. This doesn't always relate to blown diffs and other obvious break-ages, but some of the biggest headaches can come from the little issues gone unchecked. Whether you're bounding across the Savannah Way, scrabbling your way through the High Country, or even just taking in

the scenery on some local tracks, there are a good few checks you should be carrying out before hitting the road each morning. Now, we're not saying you have to complete every single check, every single day regardless. However, you should be working your way through this list at least every couple of days.

Check out these 10 minute checks to ensure your trip of a lifetime doesn't become the headache of the century!



A quick check of the oil can tell you a lot about what's happening inside the engine



POP THE BONNET!

BELTS, FILTERS, HOSES AND RADIATOR

- ☐ Visually check that your hoses and belts are not rubbing against anything
- ☐ Check drive belts are not frayed or missing ribs, then start the engine and listen for noisy pulleys and bearings
- ☐ Check and tighten all hose clamps and check their condition
- ☐ Look for any leaks or seeping around thermostat housings, water pumps and from the underside of hoses
- ☐ Check for any build-up of dirt, bugs or grass seeds in your radiator
- ☐ Remove and clean any debris out of your air filter by gently tapping it, rather than using compressed air
- ☐ Check to make sure that there is ample resistance on your viscous fan clutch when you turn off the 4WD at operating temps. It should stop spinning within five seconds. A viscous fan operating correctly will have a distinctive sound – it roars periodically when it's working correctly

FLUID CHECKS

- ☐ Check the coolant, oil, power steering, clutch and brake fluids and top up as necessary. While each fluid may be a different colour, any milky discolouration is an early warning sign of a problem a head
- ☐ Remove the oil cap and make sure the oil looks clean and there's no obvious contamination

12V

- ☐ Inspect your main engine earth cables and clean any mud and dirt away from the battery contacts and earthing points
- ☐ Check that your plug, coil and distributor leads are firmly in place and un-damaged
- ☐ Check battery terminals and brackets are tight and secure
- ☐ With the engine off, turn the key to IGNITION (without starting the engine) and check that all warning lights, such as oil pressure and low voltage, are working
- ☐ Check battery voltage at the battery and at 12v outlets – a cigarette plug voltmeter is an easy way to check for voltage drop. Stationary the battery should read 12.6V, and between 13.5-14.5V with the engine idling



You don't need a roll-cab full of tools for a morning check, just some basic screwdrivers and spanners should do the trick

UNDER THE 4WD

SUSPENSION, BRAKES AND CLUTCH

- ☐ Take an appropriate sized spanner and give all shock absorber and control arm bolts a quick go over to ensure they're tight
- ☐ Visually inspect the shocks for any stone damage or leaks
- ☐ Check for any kinks or leaks from brake lines, calipers and clutch components
- ☐ Keep an eye out for clean areas when you've been on the dirt – these are usually an indicator that something is loose or rubbing

ENGINE, EXHAUST AND FUEL

- ☐ Always remember to look up under your engine – look for leaks from the underside as well as under the bonnet
- ☐ Give your fuel tank a once over and any leaks will be clearly visible – look for wet dust around the filler neck and tank itself. Use your nose, you'll smell a leak
- ☐ Check very carefully around the exhaust system for a build-up of dry grass which can ignite from the heat and burn your 4WD to the ground
- ☐ Check for any broken exhaust system brackets or split rubber hangers – you'll usually be able to hear a rattle
- ☐ Check for any damage to sump plugs, diff/gearbox drain plugs and transmission pans
- ☐ With the engine running, check for an abnormal or rough idle. If you suspect a problem, check fuel for contamination and that fuel lines are tight and not sucking air (in a diesel). And for a petrol, check the fuel pump, spark plug leads, dizzy cap and ignition coil connections are all clean and tight

DRIVELINE

- ☐ Give your front and rear tailshafts a quick turn to check for any clunks from either diffs or uni joints
- ☐ Check for any cracks in CV boots
- ☐ If you've been driving hard, then it's worth jacking up one front wheel at a time and checking for any play in the wheel bearings by rocking the suspended wheel at 12 and 6 o'clock – a failed wheel bearing can be catastrophic
- ☐ Check for any excessive leaks from swivel hubs
- ☐ Check steering linkages by rocking the wheel at 9 and 3 o'clock



Your fan should have resistance through the viscous hub when the engine is hot (make sure the engine is switched off before you test this!)

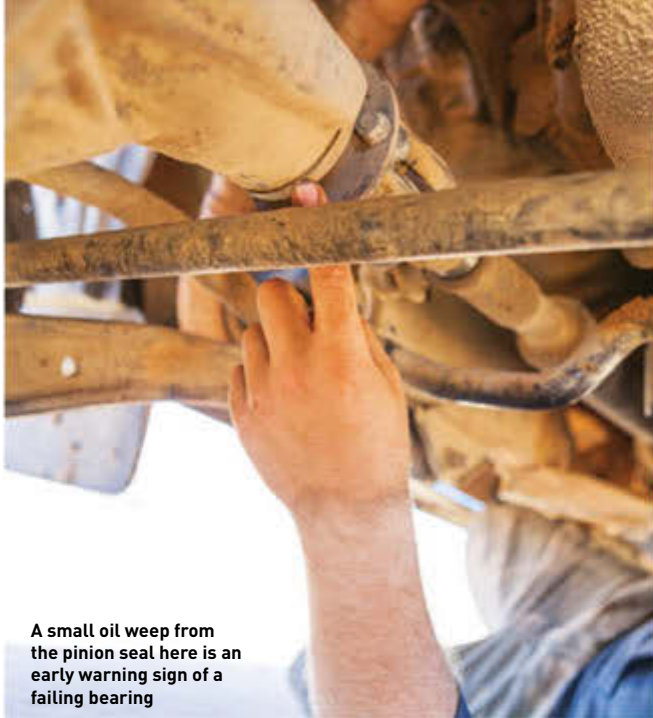


EARS, EYES AND NOSE

It pays to keep an ear out as you're driving during the day for any unusual, or uncharacteristic noises, or vibrations from under your 4WD. Get out and investigate any odd smells as they could be a dangerous leak. When you're stopped refuelling, just glance at the truck. Using your senses to notice issues early lets you narrow them down, to at very least, a specific area of the vehicle to check over once you hit camp.



Constant pounding over corrugations and dunes can loosen almost any bolt in your 4WD



A small oil weep from the pinion seal here is an early warning sign of a failing bearing

↓ BEARING ISSUES

One of the first indications of a failing wheel bearing is the brake pedal will be spongy, do not ignore this and assume that it's a brake problem. As the wheel bearing becomes loose the disc runs on a slight angle, this forces the brake pads back. When the brakes are applied a second "pump" of the pedal may be required, to push the pads back against the rotor, or the pedal may just be a lot lower than usual. Other symptoms could be a growling noise relative to wheel speed, excessive up and down play in a tyre, or a shimmy through the steering wheel at speed or while cornering.

↓ WHAT'S A WITNESS MARK?

Imagine this; you're driving along an outback dirt road and everything underneath the 4WD has a nice coat of red dust and mud. You pull over to have a glance under your car and notice a small mark where the mud and dust has been cleaned away – this is evidence of something either touching, rubbing or in some cases, leaking, creating the 'clean spot'. A witness mark is a definite indicator that something is moving. It can be a clean section around a shock bolt, indicating that the bolt is loose, or as simple as a cable tie wearing through the underbody coating; either way, when you notice a mark like this, stop, look around and give things a rattle. It won't take to find the cause.



Look closely for any clean patches – these are signs of two parts rubbing



Check your roof rack mounts daily, especially after harsh corrugations or tough tracks

↓ UP TOP

ROOF RACKS, TENTS AND TIE DOWNS

- ☐ Check that all roof rack clamps are secure and haven't moved along the gutters
- ☐ If you've got a rooftop tent, check the mounts are in line and tight
- ☐ Check, then re-check all tie downs, jerry can holders and accessories mounted to the roofrack
- ☐ While you're getting off the roof, bounce up and down once or twice on the side step. This will help you hear if there are any issues with your body mounts





A few minutes with a spanner can save you waiting days for a tow truck

TOP TIP

Outback corrugations and rough tracks have the ability to loosen just about any bolt on your 4WD over as little as a few kays. Whenever you tighten a component, mark the nut or bolt, and surrounding metal with a line from a paint marker. This will allow you to quickly see if a bolt has rotated.

WHEELS AND TYRES

- ☐ Visually inspect all your tyres and valves including spares to check for tearing, ballooning or leaks
- ☐ Check as best you can around the wheel studs for any wear or damage to the rim
- ☐ Check all wheel nuts and tighten if necessary. A loose wheel nut is most likely to occur on the left hand side
- ☐ Check for any rub marks on the tyre to indicate wear against another component

ACCESSORIES

BARWORK, LIGHTS AND EXTERNAL ACCESSORIES

- ☐ A quick shake of the bullbar will tell you if there's anything loose bolts on the bar
- ☐ Check for loose mounts on driving lights and light bars – corrugations can loosen anything
- ☐ Give your winch a quick test to make sure it's working before hitting the tracks
- ☐ Do a convoy radio check
- ☐ Most emergency beacons have a self-test function – use it
- ☐ Don't forget to check your headlights and driving lights are working before you set off in the morning. Corrugations have a nasty habit of snapping the filament in halogen globes, and it's much easier swapping them out in day light than it is at night

DAVE COX

MOUNT DARE HOTEL

"Every day I see all sorts of small problems with a traveller's 4WD and I usually notice these while I'm re-fuelling their vehicle. Loose spot lights, number plates and roof racks are the most common here. Basically it's the aftermarket accessories that are most likely to give you trouble.

But definitely the most common issues I see people having is tyre damage that goes un-noticed and unchecked. In fact, most issues people have when traveling remotely come down to them not taking the time to really look at their 4WD. It doesn't take a 100 point safety check to catch an issue, just use your eyes and look. When you're checking tyre pressures, inspect the tyre. When you stop for lunch, sit back and look at the 4WD – you'll spot most issues without having to even open the bonnet. You'll spot a broken exhaust, a torn mud guard or an oil leak plus a whole raft more issues, and remember; catching a problem early means you've got all the more chance of making a simple repair rather than calling a tow truck!"

Dave Cox, Mt Dare Hotel



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Both premium quality chairs feature convenient side storage pocket, large drink holder, generous size seat and wide base feet to prevent sinking. The 330 and 787 chairs fold easy for storage and transport, with a carry bag included.



330 CHAIR

787 CHAIR



VIEW RANGE

CAMPSITE

ESSENTIALS



BOXXER 6



BOXXER 3

CUPBOARDS

Darche's new Boxxer cupboards feature an easy set up and pack down design, and are engineered with a light weight and robust alloy frame. The Boxxer 3 solves compact storage needs, whilst the Boxxer 6 provides outstanding storage space and a large table top surface.

Constructed with resilient 600D poly fabric, durable table top board, removable shelves, practical side storage pockets, and impact resistant edges with carry handle, the Boxxers collapse into an easy to transport carry bag.



VIEW RANGE

DARCHE
OUTDOOR GEAR



North By NORTHWEST

It doesn't get much better than a trip to the Kimberley.
Here's a taste of what this epic Aussie region can dish up

WORDS AND PHOTOGRAPHY BY LINDA BLOFFWITCH ➔





The Munja Track just screams adventure!

Whether you're a 4WD first timer or a seasoned enthusiast, the Kimberley has it all. But before you pack your truck and make a beeline for the Gibb River Road like most, read on as there's a stack more to see in this region. The Kimberley is a 4WDer's mecca if you've got an adventurous streak and love a challenge. One thing's for certain, this place is pretty well twice the size of Victoria, so one visit's just not going to be enough.

BROOME

It doesn't matter whether you arrive in the Kimberley from the east or west, you're going to end up in Broome at some stage. Broome is a holiday destination in itself; it's diverse and its got a stack load of things to see and do. Although don't stay for too

long as the dirt tracks will be calling. Refuel, wet your tyres on Cable Beach, and restock your supplies before hitting the dirt.

DAMPIER PENINSULA

There's something special about this Peninsula. Where else do you get a backdrop of rich red cliffs set against pristine white sands that flow into the brightest of blue seas? It's like the colours of the Aussie flag were based on this place.

The Kimberley has some of the best coastline in Australia and you'd be hard pressed to find a bad sunset along here; and who wouldn't want to camp along those high clifftops when you can find a quiet camp and have it all to yourself.

Towards the tip of the Peninsula you reach Kooljaman, where you can lap up some resort style



accommodation if you're craving some mod cons. We prefer their simple beach shelters that overlook the bay. It's a cracking view and one of our Kimberley all-time favourite places.

The east coast of the Peninsula at Cygnet Bay has the oldest pearl farm in Australia. You can't visit here without taking a high speed boat ride to the Sunday Island group of islands to get your blood pumping. With the massive Kimberley tides, it's here where you'll get to experience them first hand as the whirlpools they create chuck you around like you're in a washing machine. It's serious fun.

WINDJANA GORGE & TUNNEL CREEK

These two attractions really need no introduction, you just gotta see them. The almost 100



Everything is bigger in the Kimberley



IT'S A 4WDER'S MECCA IF YOU'VE GOT AN ADVENTUROUS STREAK



Don't underestimate the terrain out here, be prepared for anything





How's this for a gorge!

metre high walls of Windjana Gorge are something else, and if you haven't seen many freshwater crocs you can get up really close without getting too personal, as it's croc central.

Tunnel Creek is an experience in itself. Grab yourself a good torch and some amphibious shoes and prepare yourself for an epic adventure through this 750 metre limestone tunnel. You'll be wading through water anywhere from ankle to chest height and there's aboriginal art around the place outside if you look hard enough.

GIBB RIVER ROAD

There's no hard and fast rule for where you should start your Gibb River Road trip, so use Derby or Kununurra to restock and refuel before heading out. You can get both fuel and supplies along the Gibb, but Murphy's Law says that whatever it is you'll want, they're not gonna have it. So best to get it beforehand. Derby has a bundle of history and you'll be happy you dropped in a line at the jetty, and the sunsets aren't too shabby either. Kununurra has a bundle of attractions close by and makes a great place to base yourself.

If you've been chafing at the bit to get onto the Gibb River Road, don't be too disheartened when you find the start of the road from both the Kununurra and Derby ends is tarmac for a while. With a little patience, the fun will soon begin when you hit the dirt. Air down and get ready to visit a bucket load of spectacular gorges along this 660 kilometres stretch of road.

The western section of the Gibb will take you through the stunning Napier and King Leopold Ranges and there's a load to see along this bit. The eastern section is just as good as the west with stations like Home Valley and El Questro. At just these two places alone you could easily spend a week. And you can't cross the Pentecost River without taking 'that' photo, even if you have to cross back and forwards a few times to get it right!

Sure you can drive from one end of the Gibb River Road to the other in a couple of days, but why come all this way if you're going to miss out on all the good stuff. Visiting just after the wet as the road opens, the gorges are at their most spectacular

with stacks of wet fun for swimming and water crossings.

MUNJA TRACK

For a serious 4WD adventure that is an absolute playground for an action enthusiast you can't go past the Munja Track. It's insane! Pick up a permit from Mt Elizabeth Station to travel the 225 kilometre track which ends at the coast at Walcott Inlet. In a nutshell, this track's got it all. Your wheels will definitely get wet through the numerous river crossings and you'll be locking those hubs in, switching to low range and rock crawling a plenty as you negotiate those gnarly jump ups - and that's when you've got a track to follow.

But it gets better. There are black soil plains which you'll cross where the mud is thicker than you know what, and you'll experience some jaw dropping scenery and some of the best indigenous art in the Kimberley. Now if that doesn't float ya boat, nothing will. Did someone ask "is there fishing?" You betcha! The inlet fills and almost empties daily, making it a fisho's paradise. Big barra are just



You have to get 'that' photo

hanging out for a bit of rod action. But you'll be up against the local competition as the crocs are cunning. The Munja Track demands respect and it will swallow up the ill-prepared. But when you achieve something like the Munja, it puts you on a high. If you're craving for a hard core track and you've got a week up your sleeve to do it, you just can't go past this one.

MITCHELL FALLS

Around halfway along the Gibb, turn off and head up to Mitchell Falls and Kalumburu. The Mitchell Falls track loves to kill tyres and trailers, so don't be in any hurry. From the campground, stretch your legs and walk the 2-3 hours to Mitchell Falls. Keep your eye out for some unique aboriginal art and you'll definitely want to cool off at one of those welcoming swimming holes. Chopper flights to and from the falls run on a regular basis, so why not see them from the air on the way back. Mitchell Falls campground can be regularly full so consider basing yourself at Munurru (King Edward River) campground and do a day trip to Mitchell. You've



Be prepared for plenty of red dirt

THE KIMBERLEY HAS SOME OF THE BEST COASTLINE IN AUSTRALIA



Expect some pretty spectacular skies, day and night



also got to check out the sensational indigenous art sites close to Munurru.

KALUMBURU & THE CARSON TRACK

This place is a fisho's mecca. They love it so much here that they almost have to get kicked out before they'll leave. But if you want some 4WD action and you're ready to step things up a little, grab a permit and tackle one of the local tracks. The Carson Track starts 20 kilometres south of Kalumburu and passes through the abandoned Oombulgurri Community finishing up by Home Valley Station. This track

can be a wild ride. There's also the old Pago Mission track which can be tough, that ends close to the pristine beach at Honeymoon Bay.

KARUNJIE TRACK

This is another cracking track that you should have a go at. It's an old stock route that starts out of Wyndham and stops by the Pentecost River. It's not maintained and doesn't get a lot of traffic, but it has some simply amazing scenery as you drive close to the Cockburn Ranges. Track conditions vary – anywhere from a two wheel track and the occasional jump up, to the eerie moonscape looking mudflats and

river drift sand sections. The fishing at the Pentecost River can be awesome, but don't become croc fodder as there's plenty there, so be croc-wise.

PURNULULU NATIONAL PARK

They're pretty strict on only allowing capable 4WDs and single axle trailers in this park as a few water crossings are required along the entry track. As soon as you hit the track from the highway, the scenery is pretty awesome. I'm not sure what happened with Mother Nature when creating the beehive dome formations, but she did a hell of a job. The sun dazzles the rock formations so it's a photographer's paradise. Be prepared to leave your truck and hike to the many gorges or take a helicopter flight for a bird's eye view.

WOLFE CREEK CRATER

Whichever way you get to the Kimberley, take a detour just out of Halls Creek to visit the

magnificent Wolfe Creek Crater. The view from the top of the crater's rim is awesome. If you're feeling energetic, take a walk into this 850m wide, 300,000 year old crater for a completely different perspective.


LAKE ARGYLE

Lake Argyle's only a short hop, skip and jump from Kununurra and deserves a stop. You won't be able to fathom the sheer size of this place from the water's edge, so book yourself on one of the many boat tours. You'll be absolutely blown away with its sheer size once out on the water.

SUMMING UP

It's difficult to find anything negative to write about the Kimberley. It's an adventurer's paradise and your biggest issue is finding the time to fit it all in. There's something special about the place and we put it down to that red dirt. Once it gets in your veins (and your truck, and every nook and cranny of everything else you possess), it sucks you in good 'n' proper, and one visit just isn't enough. We might be biased, but we reckon the Kimberley's got everything!

But you can't be complacent up here. There are rollovers, trucks get broken and tyres get chewed up and spat out. But with preparation and knowing your limits and the capability of your truck you will enjoy what will be the trip of a lifetime.

So if you've been thinking about visiting, remember it's an ever changing place. So think no more, just get out there and do it! 



Find some shade, relax and take it all in



There's plenty of places to get your truck's feet wet



Check out the view at Wolfe Creek Crater!

FACT FILE

WHERE:

The Kimberley is located in the far north west of Western Australia with general entry points being either Broome or Kununurra. Up the west coast, the Great Northern Highway leads to Broome and Kununurra. If you're coming from the eastern states, travel the Victoria Highway leading out of Katherine to Kununurra. Alternatively, consider some dirt tracks off the Stuart Highway like the Tanami Road and Buchanan Highway.

INFORMATION:

The Kimberley is one of the most iconic Australian destinations with stunning landscapes that lure adventure seekers from everywhere. At over 420,000 square kilometres, the Kimberley offers spectacular scenery, swimming, fishing, bushwalking, Aboriginal rock art, and 4WD adventure.

CAMPING:

Free camping opportunities are available throughout the Kimberley including the Dampier Peninsula, the Gibb River Road, outside Kununurra, Halls Creek, and along the Great Northern Highway. For paid camping, you can't go past Middle Lagoon (Dampier Peninsula), El Questro, Home Valley and Bell Gorge (Gibb River Road) and Munurru (King Edward River). Prices range between \$11 and \$25 per person per night.

FACILITIES & AMENITIES:

Facilities can vary. Middle Lagoon; flush toilets, showers. El Questro; showers, flush toilets, water, washing machines. Home Valley; showers, flush toilets, water, washing machines. Bell Gorge; solar showers, flush toilets, water, firepit. Munurru; eco toilet, firepit. Where fires are permitted bring your own firewood.

WHAT TO TAKE:

Pack according to where you'll travel. If you're planning to be remote, be self-sufficient and take all supplies including water and extra fuel. Take plenty of recovery gear, basic spare parts, additional spare tyres and a repair kit when travelling the rougher tracks. Having an air compressor is also a must.

BEST TIME TO TRAVEL:

Sections of the Kimberley can be travelled all year around. Areas such as the Dampier Peninsula, Gibb River Road and Purnululu National Park are subject to weather conditions and get closed during the wet season. They generally open during May, although the Munja Track generally isn't open until July. Other than the Munja Track, the best time to visit is from May to the end of September when day temperatures are milder. Nights in the Kimberley can get down to single digits during winter months.

FUEL & SUPPLIES:

Fuel and supplies are readily available from the major Kimberley towns. Along the Gibb River Road fuel is available at Imintji (Diesel only), Mt Barnett Roadhouse, El Questro, Drysdale River Station and Kalumburu. LPG is currently available at El Questro only. Basic groceries are available at Imintji, Mt Barnett Roadhouse and Drysdale River Station. Minor mechanical and tyre repairs can be handled at Over the Range Tyres, 50km east of Imintji.

TRIP STANDARD:

Rate the trip A through to E grade, with A meaning only suited to vehicles with an extreme level of off-road modification and E meaning perfectly suited to all types of 4WD vehicles. The Gibb River Road itself is maintained and suited pretty well to all 4WDs. Tracks off the Gibb can vary greatly as individual station tracks are the responsibility of the landowners. The Munja and Carson Tracks could be rated as a B and Karunjie as a C. If tracks are still wet, conditions can be very tough. Vehicles should be modified with off-road tyres and raised suspension, and a winch wouldn't go astray for the remote tracks.

RESTRICTIONS AND PERMITS:

You will require a vehicle access permit and camping permit for your stay at Purnululu, Bells Gorge, Munurru, and Mitchell River. These can be organised at the individual National Parks or at the Parks' offices at Kununurra and Broome or the Halls Creek Visitors Centre. Single axle trailers are only permitted in Purnululu. A permit is required to visit Kalumburu (\$50) which can be organised at the Community Office when you arrive. Also visit the office for a permit to travel the Carson Track. A permit for the Munja Track (\$100) can be arranged at Mt Elizabeth Station.

CONTACTS:

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FROM **WRECK** TO **WEAPON!**



Picked up for a steal as little more than a wreck, check out how this V8 Patrol has been built into a track-munching weapon

WORDS BY DANIEL REBER PHOTOGRAPHY BY WES WHITWORTH ➔





REAL 4WD

NISSAN PATROL GQ



***IT'S A SOUND THAT'LL
MAKE ANY 4WDER
WEAK AT THE KNEES!***



Un-roadworthy and completely run down; these are the words Peter Skarlatis used to describe the purchase condition of his GQ Patrol nearly four years ago. It takes a special kind of bloke to see the potential in a 4WD that's little more than a wreck and painstakingly build it into a tough, reliable and drivable vehicle. "When I picked up the GQ it had seized brakes, a leaking engine and half of the functions not working," says Peter. "It was rusting, with a completely lazy suspension setup and a set of 35s – long story short, she was bugged."

Being an auto electrician by trade, Peter was no stranger to getting his hands dirty beneath the bonnet of a 4WD having previously owned a Daihatsu Feroza before deciding it was time for a change. "I always wanted a GQ Patrol with a 351ci V8," says Peter. "The running gear of a GQ is perfectly suited, with a bulletproof driveline and heaps of space under the bonnet."

Now, we can't deny the logic behind the decision. Heck, we're giddy at the thought of a V8 GQ Patrol. However, there's no arguing how much work goes into a custom vehicle like this. What's more impressive than the truck you're about to see, is the fact that this weapon 4WD was entirely built by Peter himself.

Pull the choke, flick the key and turn up the volume as we take you through a 4WD built on a dream, a prayer and a heck of a lot of hard yakka!



EXTERIOR

With all that power, traction and inherent off-road ability, Peter suddenly found that the Patrol was capable of getting itself up some serious tracks – it was time for some serious barwork to match. "Patrol Docta has their name on most of the barwork," says Peter. "The rock sliders, front bar and rear bar are all from Patrol Docta and have all been built to suit the 2in body lift." The rear quarters were chopped to allow for more clearance and the rear bar was built to suit this common GQ Patrol mod. Hanging off the passenger-side front guard is a stainless steel snorkel to ensure all eight cylinders are sucking nothing but clean, fresh air.

Up the front, Peter has added an Ebay winch rated to 12,000lb that hasn't let him down yet and gets him out of anything that the twin-locked 35's cant. There's a pair of Narva Ultima 225 spotlights and a 525mm CREE light bar for added lighting on dark tracks.

In the rear of the Patrol resides the 110L main LPG tanks and along with the auxiliary tanks, provides over 200L of LPG to keep the big 4WD moving between fuel stops. Up top, you'll see the aluminum roof rack which holds on to the wrap around style awning for complete shade on those hotter days during a lunch stop.



The Patrol Docta barwork has been built to suit the 2in body lift

THE OLD GIRL WAS IN SERIOUS NEED OF A HEART TRANSPLANT



WHAT ADVICE CAN YOU GIVE TO OTHERS WHO ARE PLANNING A SIMILAR BUILD?

PETER: If I were doing it all over again, the only thing I can suggest is to pick a vehicle in better overall condition – it makes everything just a little easier and ultimately a little less pricey



ENGINE AND TRANSMISSION

If you were to tell this GQ that one day it was going to be breathing fire through 351 cubic inches of V8, the tired RB30 would have thrown a rod at just the thought. Yep, the old girl was in serious need of a heart transplant with the 3.0 inline six well into the end of days, with leaks and rough-as-guts running condition. "Tracking down a motor, I found the donor donk in a 1975 XB Ford Falcon," Peter says. "Before starting on the conversion I decided to give the motor a solid freshen up to get in singing perfectly."

First cab off the rank was getting the block machined and fitting the 0.020" oversize pistons, a small cam and heads to suit LPG. Dandy Engines took care of the engine boring while Blackwell Engines got the nod for the reco process. Peter himself handled the final motor assembly and fitted the sump, oil pick up from a Ford F150 to allow it to clear the front diff housing of the GQ.

With the engine reconditioned and ready to rumble, it was time to mate it to the indestructible Nissan 5-speed manual gearbox. Peter's mates, Tony and Chris from Christon CNC Machining whipped up a custom 20mm aluminum adaptor plate to allow the engine and box to get acquainted before dropping the whole shooting match in, using engine mounts suited for the Ford motor. "There was actually a fair bit of work, drilling, tapping and lining up the Ford bellhousing to the gearbox," explains Peter. "Once I had the measurements right, it was a case of drilling and tapping holes in the adaptor plate and fastening it all with stainless thread inserts for added strength."

The clutch assembly came courtesy of Exedy and featured an 11in pressure plate and a Nissan 11in clutch plate. "Once it came to dropping it all in, I had to reshape the firewall and install a shorter oil filter to fit the motor past the chassis," says Peter. "After the engine was in, the extractors were modified to suit and the big girl was blasting her tune through a custom 3in exhaust system." It's a sound that'll make any 4WDer weak at the knees!

A few of the ancillary parts needed a little custom touch in order to work with the new layout. Peter made custom brackets to mount the air-con compressor and air compressor to the side of the motor. "I made an endless air system out of an old A/C compressor which I connected to a custom made stainless reservoir with an air fitting for pumping up tyres," says Peter. While hooking everything up, Peter fitted a three core radiator from a TD42 and modified the outlet pipe from the radiator to suit.

The only real problem that Peter discovered after the conversion was that the extractors came a little close to the floor, creating a bit too much heat. "Yep, there were a few times when the underlay started to smoke," laughs Peter. "This was pretty easily sorted by cutting part of the floor and re-moulding a new one."



The 20mm custom adaptor plate mounts the 351 Cleveland to the Nissan 5-speed gearbox





INTERIOR

Throw open the rear barn doors and it's clear that a lot more thought has gone into the setup than just strapping an esky to the floor. Above the auxiliary gas tanks is a steel frame which supports the drop-down fridge slide and 60L Ice Box fridge. Under the fridge is a single drawer for storing extra bits and pieces to leave the rest of the Patrol as clutter-free as possible.

Keeping the beers cold is the job of the Smart Solenoid dual battery that Peter wired in. Using an AC Delco Premium 90 amp hour for starting duties and 97 amp hour AC Delco Marine for the auxiliary, the GQ has plenty of juice in reserve for running the fridge, lights, stereo and of course cranking the big V8 in the morning.

Convoy communications are handled by a Uniden UH400SX UHF while a Pioneer head unit helps to drown out the road noise.



WHAT ARE YOUR MAIN USES FOR THE PATROL?

PETER: I mainly use the vehicle for 4WDing, camping, hunting, dirt-biking and longer range touring trips

WHEELS, TYRES, SUSPENSION AND DRIVELINE

Sometimes, behind every cloud is... well you've heard that one before. The silver lining behind the basic suspension lift that was installed by the previous owner is that Peter now has an almost endless array of options for upgrading to a more capable setup. "The suspension upgrade is certainly at the top of the list," laughs Peter. "It's fine for now, but I find the ride quite stiff for 4WDing and would like to have it more personalised to suit my driving, too."

Although basic, the suspension system fitted is still getting Peter out in the bush instead of on the couch. With the 2in suspension lift and 2in body-lift, Peter has had no problem fitting the meaty 35x12.5x15 Goodyear Wrangler MTR tyres wrapped around 15x8in Sunraysia rims. Bringing the big rubber back in line is a Tough Dog return to centre steering damper, which is a must on big tyred trucks.

Getting all that twist to the tyres are twin air locked diffs sporting the standard 4.3 Nissan diff ratios. Once again Peter jumped in, fitting the lockers to the diffs and now has no problems finding traction when the going gets tough.



A return to centre damper is a must-have part for a 4WD with big rubber



35in Goodyear Wranglers keep the Patrol moving when the tracks get tough





RUNDOWN

VEHICLE: 1990 GQ Patrol

ENGINE: Ford 351ci Cleveland V8

GEARBOX: 5-speed manual

4WD ACTIVATION: Part time with high and low range

SUSPENSION: 2in Tough Dog coils and Tough Dog shocks

TYRES: 35x12.5R15 Goodyear Wrangler MTR on

15x8 Sunraysia rims

OTHER GOOD GEAR: Patrol Docta front bar, rear bar and side steps, stainless-steel snorkel, 12000lb winch, Narva 225 spotlights, alloy roof rack, ARB Air Lockers, 2in body-lift



SPECIAL THANKS

I'd like to give a big thank you to Tony and Chris from Christon CNC Machining for the adaptor plate and of course my beautiful wife Domenica for not divorcing me when I decided to start another project!



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FORM OR FUNCTION?

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The alloy vs steel wheel debate has raged for decades – let's put it to bed once and for all

WORDS BY DANIEL REBER, PHOTOGRAPHY BY 4WD ACTION →





STEEL WHEELS

PROS:

- CAN USUALLY BE REPAIRED TRACKSIDE
- CHEAP PURCHASE AND REPLACEMENT PRICE
- STRONG AND ROBUST

CONS:

- HEAVIER THAN ALLOYS
- LIMITED IN DESIGN

For a long time now the argument for steel wheels has been their inherent strength and repair-ability when out in the bush. The theory was that if you were to slam into a washout, or belt a rock and bend a rim, that you could remove the tyre and bash the rim back into shape enough to seal against the bead.

This is definitely a feature that an alloy can't compete with. Due to the manufacturing process of alloy wheels, they generally tend to crack rather than simply bend. If they do bend, however, it's near on impossible to bend them back without fracturing the alloy – usually this takes a decent chunk out of the rim and renders it completely stuffed.


Price is another factor that can't be ignored. Coming in at anywhere from \$80-\$150 a corner, steel wheels offer a distinct price advantage to alloys, which can eclipse several times that of a steel rim. When you're talking about a full set of six, the price difference is immense.

Now, it's not all peaches in the steel wheel camp and there are some definite downsides that can sway some people towards the alloy alternative. The most prominent of all these is the weight of steel wheels. Often weighing 4-5kg more than an alloy, there is a noticeable effect on braking, handling over rough terrain and drivetrain strain as opposed to alloys. Another factor is with many late model 4WDs running close to their GVM rating – this difference in weight across six wheels can add up quickly.

"Mate, I'd never run anything but split steel rims on my old girl – none of that fancy alloy stuff!"

We've all come across the old cocky who swears by the simplicity and reliability of steel rims in the bush and there was a time where that was an inarguable fact. The old fellas argued that you could take a lump hammer to a steel wheel and knock it back into shape, whereas an alloy wheel would just crack. Now, the reality of steel wheels is that yes, they are easily repairable and relatively cheap. These days, however, with high-tech alloys and stronger forging processes,

are those age-old arguments still on the money, or is it naïve to still beat the steel wheel drum in 2015?

There's a lot that goes into making the decision to buy either type; there are price, weight and aesthetic factors to consider as well as the obvious strength and reliability questions. Now, just when you're thinking there's a lot to consider here, also realise the fact that heavier wheels will inevitably place more strain on driveline components – just in case you thought the decision was still straight forward. Okay folks, place your bets now as we get stuck into the nitty-gritty of both and put this debate to bed once and for all. 

DAVE COX, MT DARE HOTEL

"I love alloy wheels, they look great, but are more easily damaged. Steel wheels are a much better option in my opinion for serious bush work or touring as they are stronger and easier to repair."



**IT'S NOT ALL PEACHES
IN THE STEEL
WHEEL CAMP**



ALLOY WHEELS

PROS:

- OFTEN MUCH LIGHTER THAN STEEL
- ENDLESS STYLE OPTIONS
- SOME AFTERMARKET ALLOYS CAN BE STRONGER THAN STEEL

CONS:

- MORE EXPENSIVE THAN STEEL WHEELS
- IMPOSSIBLE TO REPAIR TRACKSIDE

There's been a big push in the past few years towards the use of alloy wheels on 4WDs. Not only are manufacturers now offering alloy wheels as standard on almost every 4WD, but the aftermarket industry for them is booming.

It's no mere coincidence that they've taken off with this kind of enthusiasm either. Alloy wheels are much lighter than their steel counterparts due to the materials they're made from. Alloy itself, refers to the combination of multiple metals, with different properties. This allows the manufacturers to combine the best elements of both metals to create something that is technologically superior to plain old steel.

There are many benefits that come with reducing the weight of the wheels. By reducing the rim weight, the un-sprung weight is lowered dramatically and this assists greatly with the ride quality, handling and braking ability of the 4WD. Not only that, but there will also be less strain placed on the wheel bearings, driveline and suspension components.

But, once again it's not all good news for alloy wheels either, because alloys tend to damage much more easily than steel. This is often due to the alloys softer compound, and the fact that a large rock or harsh washout can do not only cosmetic, but also serious structural damage with much less chance of repair. There's also one other factor that may apply to some; how comfortable are you going to be rubbing your \$500 polished alloy wheel against a rock?

All wheels should be load rated for Australian roads



RIM SPECS

Just like all reputable automotive parts, any wheel will have to be designed and built to meet strict legal requirements before they can be used on a vehicle. You'll find your rim specs on a compliance plate in your 4WD.

PRICING

It's not hard to see how pricing can play a big part in a 4WDer's decision

RIM	PRICE RANGE
FACTORY ALLOY	\$800+
AFTERMARKET ALLOY	\$200-\$400
FACTORY STEEL	\$100-\$150
AFTERMARKET STEEL	\$80-\$150



Factory alloys are by far the most expensive - but are they stronger?



TESTING

So now you've seen the info on both, read the pros and cons on paper. But at the end of the day, how do they stack up in the real world? We put several rims through their paces to determine which one we'd pick – the results may surprise you.

BALANCING

There are a fair few rumours that float around when it comes to steel wheels needing more weights to properly balance than an alloy rim. To test this, we took to the balancing machine with our four rims and tested them without tyres, and with and without a valve. The results surprised us to say the least. Quite astonishingly, the steel wheel was perfectly balanced from factory, whereas the factory alloy required the most amount of weight to balance.

Both the aftermarket alloy and aftermarket steel both required some weight to balance



BALANCING

	FACTORY ALLOY	AFTERMARKET ALLOY	FACTORY STEEL	AFTERMARKET STEEL
WITH VALVE	35 grams	20 grams	0 grams	20 grams
WITHOUT VALVE	40 grams	15 grams	5 grams	15 grams

Quite surprisingly, the factory steel wheel balanced perfectly straight off the shelf



POPPING THE BEAD

Low pressures and the ability for a rim to hang on to the bead of the tyre go hand in hand. When the going gets tough, you need the confidence to drop those pressures right down and not lose the tyre off the rim. We tested each tyre's bead retention ability, by lowering them all to 10psi and then using a tyre shop's bead breaker to pop the bead. Using the machine's pressure gauge we were able to determine which rims held on the hardest.

This test was defiantly a winner for the factory fitted rims, with the ability to hold onto the tyre much better. Upon closer examination we noticed that the factory wheels had a squared edge on the lip where the bead sits. Both aftermarket wheels had a rounded edge which allowed the tyre to slip off easier.

BREAKING THE BEAD

FACTORY ALLOY	AFTERMARKET ALLOY	FACTORY STEEL	AFTERMARKET STEEL
105 psi	80 psi	9 psi	80 psi



Quality aftermarket wheels are usually as strong, if not stronger than their steel counterparts



IMPACT TEST

The next test was put together to see if steel wheels are definitely stronger than alloys. We set this test up in a hydraulic press that has a gauge on the top to indicate how much pressure it is forcing onto its subject. By setting one wheel at a time onto the press we pressed down onto the outer lip of each rim; recording how much pressure it took to indent the lip of the wheels.

Amazingly, the test revealed that the strongest wheel of them all was actually the aftermarket alloy. Not only that, but both alloys were indeed stronger than the aftermarket steel and the factory steel was only on par with the factory alloy – the aftermarket alloy left them all for dead.

In real-world terms, this means that a solid impact at 70km/h would likely deform a steel wheel, while the alloy would have to cop the same impact at over 100km/h to sustain the same damage.

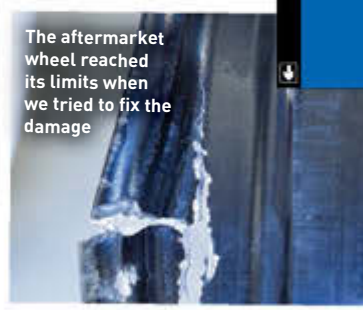


REPAIRING

Once we completed our impact test, we set out to repair the damage using only track-side methods. Again we were surprised to see that the factory alloy was able to be repaired enough to hold air against the tyre. The steel wheels were both able to be repaired, with the aftermarket requiring the least work to fix. Due to its stronger design, the aftermarket alloy was unable to be repaired as it reached its distortion limit and developed a crack – game over.



The aftermarket wheel reached its limits when we tried to fix the damage



IMPACT TEST

FACTORY ALLOY	AFTERMARKET ALLOY	FACTORY STEEL	AFTERMARKET STEEL
OUTER LIP	OUTER LIP	OUTER LIP	OUTER LIP
50 Kg/cm ²	80 Kg/cm ²	50 Kg/cm ²	25 Kg/cm ²



The factory alloy was able to be repaired just enough to hold air

PARTING THOUGHTS

With most late model vehicles coming pretty close to their GVM, it is hard to ignore the obvious weight saving benefits of an alloy rim. Not only do the obvious kilogram issues add up, but the handling, braking and overall ride-quality issues are hard to go past.

With the advent of high-strength aftermarket alloys the debate has cleared up in many ways. You can now purchase extremely strong alloy wheels for about a hundred bucks more than an equivalent steel rim, meaning it's much more affordable than picking up factory alloys. Sure, they may be harder to repair, but for the majority of touring vehicles, they'll cop a fair bit more grief than a steel before giving in.

If we had to choose a winner – and we do – it would have to be the aftermarket alloy wheels. Strength, weight, bead holding and now price make them arguably the best option for most tough touring vehicles. Oh, and by crikey they do look the ducks guts don't they?

For many years steel wheels have been the go-to choice for tough touring – is that still the case?



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HOW DO GENUINE TURBOS COMPARE WITH NON-GENUINE TURBOS?

Genuine turbos matter.

The world of turbochargers can be very complex, knowing the best turbo for your set-up and application is one thing, and getting a great deal is another. In fact, getting the best deal is leaving many Australians forking out even more money than they budgeted because they have succumbed to price and purchased a non-genuine turbo.

Owner of Superior Turbos in Toowoomba, Peter McGrath said in his experience when people ring with a turbo problem it is almost always because they have fitted a counterfeit product.

"I had a customer once who had fitted three Chinese manufactured turbos he purchased on EBay for around \$500 a pop, and for that same amount he could have purchased a genuine turbocharger and had a fully functioning vehicle," Mr McGrath said.

It is a similar story for Wimmera Diesel & Action Off Road. Part owner Robert Schultz said he has seen his fair share of damage from non-genuine turbos.

"Here in the shop we have seen exploded compressor wheels, balancing issues, engine damage including poor engine performance and economy," Mr Schultz said.

Owner of Precision Turbochargers in Sydney, John Findanis said he believes people refuse to accept that a counterfeit turbo will be a problem for them.

"Many consumers think a turbo is a turbo. But this is not the case – turbos are too high-tech for copies and the copies have no use in the real world. Counterfeit turbos are just junk," Mr Findanis said.

Denco Diesel's Turbocharger expert, Paul Taylor agrees, and said it's easy to be deceived online.

"Often the products may look comparable online, with some copies made to give the impression they are the real McCoy even having the genuine part number inscribed into the turbo," Mr Taylor said.

"It's like comparing any product with those bought at a two-dollar shop – the knives are blunt, forks bend, shoes fall apart – it is just typical of all that cheap stuff, it's built for a price."

"The problems counterfeit turbos cause include complete explosions to premature failures, and oil and gas leakage damage," he said.

To give people peace of mind with their turbo, a group of mechanics and industry specialists developed the Gen5 Turbo brand for workshops and distributors of the five genuine turbochargers on the market – Garrett, Borg Warner, IHI, Mitsubishi and Holset – to ensure consumers are getting a product that is safe, reliable and built to last.

Next time you're in the market for a turbocharger, be sure to demand a Gen5 Turbo – your back pocket and your car will thank you for it.

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Australia's **4WD Hotspots**

WORDS BY CAHN TURNER, PHOTOS BY 4WD ACTION



We've picked our 15 best 4WDing hotspots
so you can plan your next adventure



MACKAY, QLD



Slog through tough 4WD tracks to get to these pristine beachside campsites and scenic vistas

Located about a thousand clicks north of Brisbane, Mackay is one of those places where you can find fantastic camping and tough 4WDing that is all achievable over a solid weekend – assuming you have a truck that can go the distance. Service the winch and pack a recovery kit, things will get exciting.

TOP THREE TRACKS

- Cape Palmerston's Inland Tracks – Cape Palmerston
- Pineforest Loop Track – Mia Mia State Forest
- Mineshaft Track – Mia Mia State Forest

TOP THREE CAMPS

- Camp Creek Campground – Cape Palmerston
- Diggings Campsite – Crediton State Forest
- Windmill Bay – Cape Palmerston



COFFS HARBOUR, NSW



Where the mountains meet the sea, Coffs Harbour offers the best of both worlds

Coffs Harbour is on the NSW North Coast and is the only place in NSW where the Great Dividing Range reaches the Pacific Ocean. The combination of excellent beach camping and mountainous 4WD tracks mean that Coffs is way up on every 4WDers list of hotspots.

TOP THREE TRACKS

- Broken – Wedding Bells State Forest
- England's Road – Boambee State Forest
- Hard Power Lines – Wedding Bells State Forest

TOP THREE CAMPS

- Pebbly Beach Campground – Yuraygir National Park
- Station Creek Campground – Yuraygir National Park
- Illaroo Campground – Yuraygir National Park

INNAMINCKA, SA



History and out-back touring galore, Innamincka is an out-back 4WDing paradise

Surrounded by the Strzelecki, Sturt Stony and Tirari Deserts, Innamincka is South Australia's out-back playground. If you're into Aussie history you have to check this place out. Plenty of day trips or longer remote touring tracks are on offer. Innamincka has something for everyone.

TOP THREE TRACKS

- Old Strzelecki Track – Strzelecki Regional Reserve
- Cordillo Downs Road – Sturt Stony Desert
- Coongie Track – Innamincka Regional Reserve

TOP THREE CAMPS

- Cullyamurra Waterhole – Innamincka Regional Reserve
- Dig Tree
- Coongie Lake – Innamincka Regional Reserve



HAWKER, SA

Rugged terrain, plenty of steep tracks and amazing mountain scenery

Hawker is your starting point before you explore the fantastic Flinders Ranges. This is rugged country, so make sure you've honed your skills driving steep tracks! You're gonna need to grab low-range and get moving because there is so much to see. The views around here are sensational and make it a sure addition to our hotspot list.

TOP THREE TRACKS

- **Skytrek** – Willow Springs Station
- **Mt Gill Track** – Warraweena Conservation Park
- **Cockatoo Dunbar Loop Track** – Warraweena Conservation Park

TOP THREE CAMPS

- **Brachina Gorge** – Flinders Ranges National Park
- **Parachilna Gorge** – Flinders Ranges
- **Wilpena Pound** – Flinders Ranges National Park



LITHGOW, NSW

You'd be hard pressed to find more epic 4WDing and camping so close to Sydney

Located two hours west of Sydney, Lithgow has a rich history and is surrounded by plenty of bushland, two ingredients which make it a perfect spot for 4WDing and camping. Throw on your muddies and pack a camera cos you're gonna have plenty of opportunities to show off your truck's capabilities, and grab some amazing scenic shots.

TOP THREE TRACKS

- **Firetruck Hill** – Lidsdale State Forest
- **Mt. Walker Summit Climb** – Lake Lyell
- **Spanish Steps** – Newnes State Forest

TOP THREE CAMPS

- **Woolshed Flats** – Cocoparra National Park
- **Lake Lyell** – Unmarked bush campsites
- **Newnes Campground** – Newnes



BROOME, WA



The doorstep to one of the last, most remote parts of Australia – Get ready for tough remote touring

This is the wild west. Broome is the starting point to get off the beaten track in the Kimberley. Up here you have some of the most remote and toughest 4WD tracks anywhere in Australia. The rewards are obvious – very few people, spectacular scenery, unspoilt beaches and an absolutely huge tract of country to explore.

TOP THREE TRACKS

- **Gibb River Road** – Purnululu National Park
- **Munja Track** – Mount Elizabeth Station
- **Tablelands Track** – Home Valley Station

TOP THREE CAMPS

- **Quondong Point** – Dampier Peninsula
- **Cape Leveque** – Dampier Peninsula
- **Windjana Gorge** – Windjana Gorge National Park



WEIPA, QLD



The heart of the Cape, the top of every 4WDers bucket list

The largest town in the Cape York Peninsula, Weipa is your launching pad to head north, or explore the beautiful tropical landscape of the Cape. Surrounded by legendary 4WDing, world famous pubs and perfect campsites, Weipa is way up on the list of 4WD hotspots! What are you waiting for?

TOP THREE TRACKS

- **Barrage Track**
- **Pennefather Beach Tracks** – Pennefather Beach
- **Frenchman's Track** – Iron Range National Park

TOP THREE CAMPS

- **Pennefather River Camping Area** – Pennefather River
- **Tentpole Camp** – Tentpole Creek
- **Cullen Point Camping Area** – Mapoon



WALHALLA, VIC



The amount of 4WDing that is packed into this area makes it an absolute goldmine

Walhalla is around 100km due east of Melbourne and is an old goldmining town, the 4WDing through here is perfect for a low range weekend, but we guarantee you'll want to stay longer. There is so much to discover, with alpine huts and tracks scattered all over the place. Strap on your boots, and your muddies, and have a go.

TOP THREE TRACKS

- **Army Track** – Walhalla
- **Deep Creek Tracks 1-5** – Walhalla
- **Trig Track** – Walhalla

TOP THREE CAMPS

- **O'Tooles Campground** – Thomson State Forest
- **Fulton's Campground** – Thomson State Forest
- **Aberfeldy Bridge Campground** – Baw Baw National Park



BRUNNY ISLAND, TAS

Tasmania's Tasmania – this small Island located off the south east of Tassie has it all!

Located off the south east of Tasmania, Bruny Island is wet and wild with rugged seascapes and unspoilt bush. Wildlife is abundant and really gives you the idea that you are far away from anywhere. Outstanding 4WDing and picture-perfect camp sites combine to make Bruny Island a must see.

TOP THREE TRACKS

- Hanssons Road – Adventure Bay
- Cloudy Beach – South Bruny National Park
- Coolangatta Beach – Mount Mangana Forest Reserve

TOP THREE CAMPS

- Cloudy Corner – South Bruny National Park
- The Neck – South Bruny National Park
- Jetty beach – South Bruny National Park



HARVEY, WA

Home to some of Australia's most idyllic coastline and 4WDing

Western Australia's expansive coastline and varied inland terrain makes it a perfect 4WD hotspot. You're going to find a challenge wherever you decide to go, whether it is inland or coastal, the tracks near Harvey showcase unbelievable scenery that is only matched by the incredible 4WDing. It's definitely worth a trip.

TOP THREE TRACKS

- Harvey Staples Line
- Brunswick Junction
- Ferguson Valley to Wellington NP

TOP THREE CAMPS

- Lake Brockman – Harris River State Forest
- Lake Navarion – Waroona
- Nanga Mill – Lane Pool Reserve



MILDURA, VIC



On the banks of the Murray River, Mildura is a hub for many 4WDers

Head pretty much any direction out of Mildura and you'll find an adventure. Situated on the banks of the mighty Murray River, the area surrounding Mildura is a land of contrasts. Colourful, vivid landscapes that are common near the Murray give way to huge desert-like expanses in the outer regions. One thing's for certain though – you won't be disappointed!

TOP THREE TRACKS

- **Border Track** – Murray-Sunset National Park
- **Sunset Track** – Murray-Sunset National Park
- **Underbool Track** – Murray-Sunset National Park

TOP THREE CAMPS

- **Police Bend** – Murray River
- **Border Camping Area** – Murray-Sunset National Park
- **Rocket Lake Camping Area** – Murray-Sunset National Park



COOKTOWN, QLD



Your gateway to the cape, Cooktown is the start of every 4WDers dream trip

On the east coast of the Cape York Peninsula, once you reach Cooktown you know your Cape adventure is only days away. Make sure you take some time to check out the local 4WDing though, because there are some absolutely cracking tracks around here. Be prepared for some insanely difficult sections of track.

TOP THREE TRACKS

- **CREB Track** – Daintree Rainforest
- **Laura to Maytown track**
- **Bathurst Head Track** – Cape Melville National Park

TOP THREE CAMPS

- **Elim Beach** – Hope Vale Aboriginal Community
- **Roaring Meg Falls** – CREB Track
- **Endeavour River Escape** – Cooktown



MAROOCHYDORE, QLD



The best of both worlds with mountainous inland tracks and incredible tropical islands

They don't call it the Sunshine Coast for nothing! With Moreton Island to the south and Fraser to the North, you can flip a coin in the morning and start living on island time the same day. If you're after some low-range tough tracks that threaten to swallow your truck whole – don't say we didn't warn you about the Glass House Mountains!

TOP THREE TRACKS

- **Big Red Track** – Glasshouse Mountains
- **Fraser Island** – Fraser Island
- **Moreton Island** – Moreton Island

TOP THREE CAMPS

- **Teewah Beach** – Great Sandy National Park
- **Sandy Cape** – Fraser Island
- **The Wrecks** – Moreton Island

DARWIN, NT

Head up north to check out the appeal of Australia's most northern capital

The most northern capital city of Australia, Darwin offers heaps of exciting 4WDing, with plenty of National Parks nearby. The legendary Kakadu National Park provides an amazing backdrop for 4WDing adventures with wetlands, rock formations and waterfalls throughout. Make sure you have plenty of time to explore.

TOP THREE TRACKS

- **Reynold River Track** – Litchfield National Park
- **Jim Jim Road** – Kakadu National Park
- **Gunn Point Road** – Koolpinyah

TOP THREE CAMPS

- **Daly River Camp Site** – Daly River Conservation Park
- **Shady Camp** – Mary River National Park
- **Surprise Creek Falls** – Litchfield National Park



KARRATHA, WA

Karratha means 'good country' in the local Aboriginal language, and that's exactly what it is

South of Broome and the Kimberley, Karratha offers a doorway to spectacular scenic views without the crowds. You can expect stunning waterfalls and gorges in the National Parks but you'll have to be prepared to slog through some long, rough 4WD tracks to find them. Or relax on the beach, your choice.

TOP THREE TRACKS

- **Skull Springs Road** – Karlamilyi National Park
- **Coppin Gap Road** – Coppin Gap
- **Graphite Valley Track** – Karlamilyi National Park

TOP THREE CAMPS

- **Dale's Gorge Campsite** – Karijini National Park
- **Coolbro Pool Campsite** – Karlamilyi National Park
- **Cape Keraudren Campsite** – Pardoo



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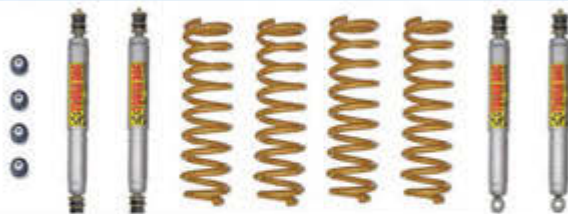
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OUR STORY

4WD1 was founded at the beginning of the 4WD and off-road recreation boom - way back in 1976. Initially, the business marketed engine kits to allow fitment of Chevy V8s to Landcruisers and Holden sixes to Land Rovers. Today, 4WD1 is one of the world's largest 4WD suspension specialists.

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OUR STORY

4WD1 was founded at the beginning of the 4WD and off-road recreation boom - way back in 1976. Initially, the business marketed engine kits to allow fitment of Chevy V8s to Landcruisers and Holden sixes to Land Rovers. Today, 4WD1 is one of the world's largest 4WD suspension specialists.

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500,000KM AND STILL GOING STRONG

WORDS BY ADRIAN HODGSON PHOTOGRAPHY BY 4WD ACTION ➔

This off-the-clock Defender proves that
buying used has never been better



Would you buy a near 20 year old 4WD with almost half a million kilometres on the clock? How about one that had been modified and was still running on its original, unopened engine? If it sounds like madness to you, rest assured, you're not alone. But for Shane Gosewisch, owner of this battle hardened Defender, it was the smartest off-road purchase he's ever made.

"I used to own a Pajero iO that had a lift, extended Tough Dogs in the rear, sliders, under-body plates, a snorkel, the lot. It used to get along nicely and I was just about to start doing some more modifications to it when the Suzuki Jimny came up for sale. That was a local truck and I just had to have it. It was a daily driver but not a very practical one, and just a bit of fun on weekends. That's part of why it had to go. It just wasn't that practical or big enough for touring. It had big reduction gears and 33in tyres so it was revving too hard everywhere. You had to do 4600rpm to see 95kph in top gear and the full chro-moly exo cage was a bit much."


"The Defender was another local 4WD. I knew the mechanic that did a lot of the work to it and maintained it for the owner, and it had been looked after really well and modified sensibly. Even though it had done 430,000kms on the original engine it still pulls well and is a lot nicer than the Jimny on the highway."

Knowing the history of a used vehicle is a massive bonus, and if you're lucky, it can set you up for a potential bargain, especially for a vehicle with this many kilometres on the odometer. Land

Rovers have a reputation for being pretty hardy things provided they are well maintained, but with this example having travelled the equivalent of more than ten times around the planet before Shane even got his hands on it, surely there have been problems.

Shane explains, "It's been fine since I've had it. It doesn't leak any more than a Defender normally does, and with a steel floor with holes in it, any water that gets in always has a way of getting out again. The engine is still original and pulls nicely considering the life it's had. It hasn't even been rebuilt. The gearbox has been refreshed and the injector pump was done about 60,000kms ago."

"I got a really good buy, especially considering the previous owner wasn't necessarily ready to part with it and it's easy to look after. Generally if you keep the oils and fluids up on them and look after it they seem to last pretty well. There's not a lot of electronics on it so there's less to actually break or fail. After a trip I just Gurney the mud off it and it's pretty well good to go. It goes in for a service after any big trip and if something feels wrong I get it checked, but it's generally either 5,000km or 10,000km services depending on how I've been driving it."

"If it's been working hard I'll do it earlier, but at the moment, it's mainly just a daily driver, which is a bit sad. When we go out in it it'll be down on the beach for a fish or on one of the tracks out around Coffs. We just pick a track and continue on for a bit, then pick a left or right and see where it takes us. If you head east from anywhere around Coffs you'll get back out on the coast somewhere." 



EXTERIOR

With its widened rear wheel arches and checker plate adorning the tops of the front guards, Shane's Defender is all about being a true tourer that doesn't suffer in the bush. The agricultural lines of the Land Rover combine with some basic tubular steel reinforcement in the form of a bullbar of unknown origin and Terraforma sill bars to make the England native more than a match for the rigours of the Aussie outback. Add to that a roof rack packed with Maxtrax and all the essential camping gear and a pull-out awning and Shane's off before you can say 'Go beyond'.


"Probably the best trip we've done so far is the one we just returned from. I've only had the truck about eight months and it was nice to do something different. Doing the camping and the touring was great. I bought it for the touring side of things, as the Jimny I had wasn't ideal. The Defender was a proven vehicle. I knew the mechanic that did a lot of the work on it, and I knew it was a good truck. It's seen most of Australia in its time so hopefully I'll be able to do a few of those trips with it again."

"We'll shoot up to Fraser to give it a bit of a warm-up. After that we'll head to the Cape and then out over the Simmo. They're the trips on horizon. Part of the interest I have in touring comes from wanting to see parts of the country myself. You look at magazines like 4WD Action and you watch TV shows and you want to see it for yourself."

Shane says that the handiest accessory in the Defender is the on-board air compressor. "It's great to pump up the tyres, and as we do a bit of beach work, having on-board air encourages you to do your tyre pressures properly. If you do them properly you're going to get further and you're more likely to get out of what you've gotten yourself into as well. You're also better on the truck than if you just tried to get by without doing your pressures, and you've got it there when you're ready to drive on the highway again. It's simple, but you'll get way more out of your 4WD with one, than without."



Snorkel does its best to keep muddy water out of the intake. Looks like it was just tall enough

A white 4WD vehicle, possibly a Land Rover Defender, is shown from a front-three-quarter view, driving through a deep, muddy river. The vehicle is heavily splattered with mud, particularly on the front bumper, grille, and wheels. It has a prominent front bull bar with a winch and extra lights. The windshield has a decal that reads 'WWW.4WD4ACTION.COM.AU'. The background is a dense forest with tall trees and lush green foliage.

**WOULD YOU BUY A
4WD WITH ALMOST
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KILOMETRES ON
THE CLOCK?**

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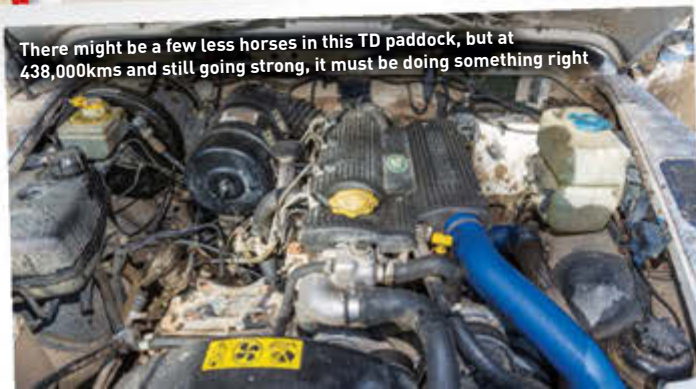
⬇ **SUSPENSION, DRIVETRAIN & ENGINE**

The Bilstein shock absorbers and aftermarket springs sit Shane's Defender just two inches higher than stock, but this has proved more than enough clearance for the types of tracks and terrain he's tackled so far.

"Whereas my Suzuki was probably better at climbing rocks, this thing handles the touring side of things much better and can drive up the side of a mountain. The Defender would be fun on portals, I reckon, but it's pretty capable as it is."

Considering the work Shane's engine has done, it's not bad on juice either. The 2.5L four-pot is sipping at a pretty consistent 12.3/100, which is not bad considering the brick-like shape of the Defender and the kilometres already completed. If there's ever a problem with the vehicle, Shane cites readily available parts and an extremely basic engine package as the reasons why this vehicle isn't overly expensive to keep running, adding that, "Sometimes you might have to get a part out of the UK, but the interchangeable nature of the various Land Rover models is pretty good and prices aren't any worse than anything by Suzuki or Toyota. There is plenty of aftermarket support available too."

There might be a few less horses in this TD paddock, but at 438,000kms and still going strong, it must be doing something right

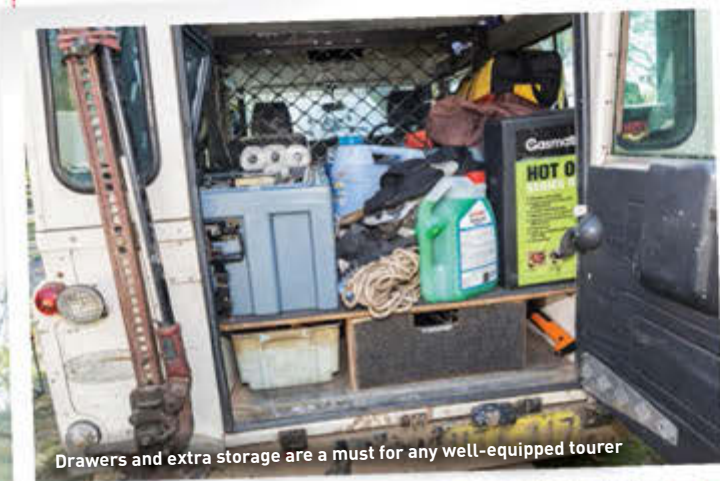


INTERIOR

There's nothing in the cabin of Shane's Land Rover that doesn't need to be there and that's very clearly the way he likes it. After all, if the driver's compartment is cluttered with gear you're less likely to tackle the tracks and obstacles that let water in, and that's to say nothing of the available space that is already at a premium.

"Driver's comfort is a bit of a compromise as it is. Your right arm has to be tucked in unless the window is open, but the floor lets the water back out if it gets in anyway, so it's not that much of a problem. High on the list of things to do next will be to redo the dash and fit a new centre console and some new gauges. A new radio, move the CB into the dash and possibly a bit of engine monitoring as well. Ideally, I'll have a device that can monitor EGTs, coolant level, coolant temp and some other vitals. I'd like a tachometer as well."

In the back of the Defender behind the cargo barrier is a set of drawers and storage that Shane says has made great use of the available space. He's now able to store stuff out of the way and still have space for luggage, a fridge and all the essentials required to head bush for a week or two.



Drawers and extra storage are a must for any well-equipped tourer



**IT WAS THE
SMARTEST
OFF-ROAD
PURCHASE
SHANE'S
EVER MADE**



RUNDOWN

VEHICLE: 1995 Land Rover Defender

ENGINE: 2.5L turbo diesel 4-cylinder

GEARBOX: Standard 5-speed

SUSPENSION:

FRONT: Bilstein coil overs

REAR: Bilstein coil overs

TYRES: BF Goodrich Mud Terrain

WHEELS: 16in bead lock alloys

OTHER GOOD GEAR: Steel bullbar, Terrafirma steel sill bars, steering rack protection, ARB twin air compressor, Warrior C9500 winch, Maxi Drive lockers front and rear

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THE WATER BACK
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BUILD THE ULTIMATE D40 NAVARA

WORDS AND PHOTOGRAPHY BY WES WHITWORTH

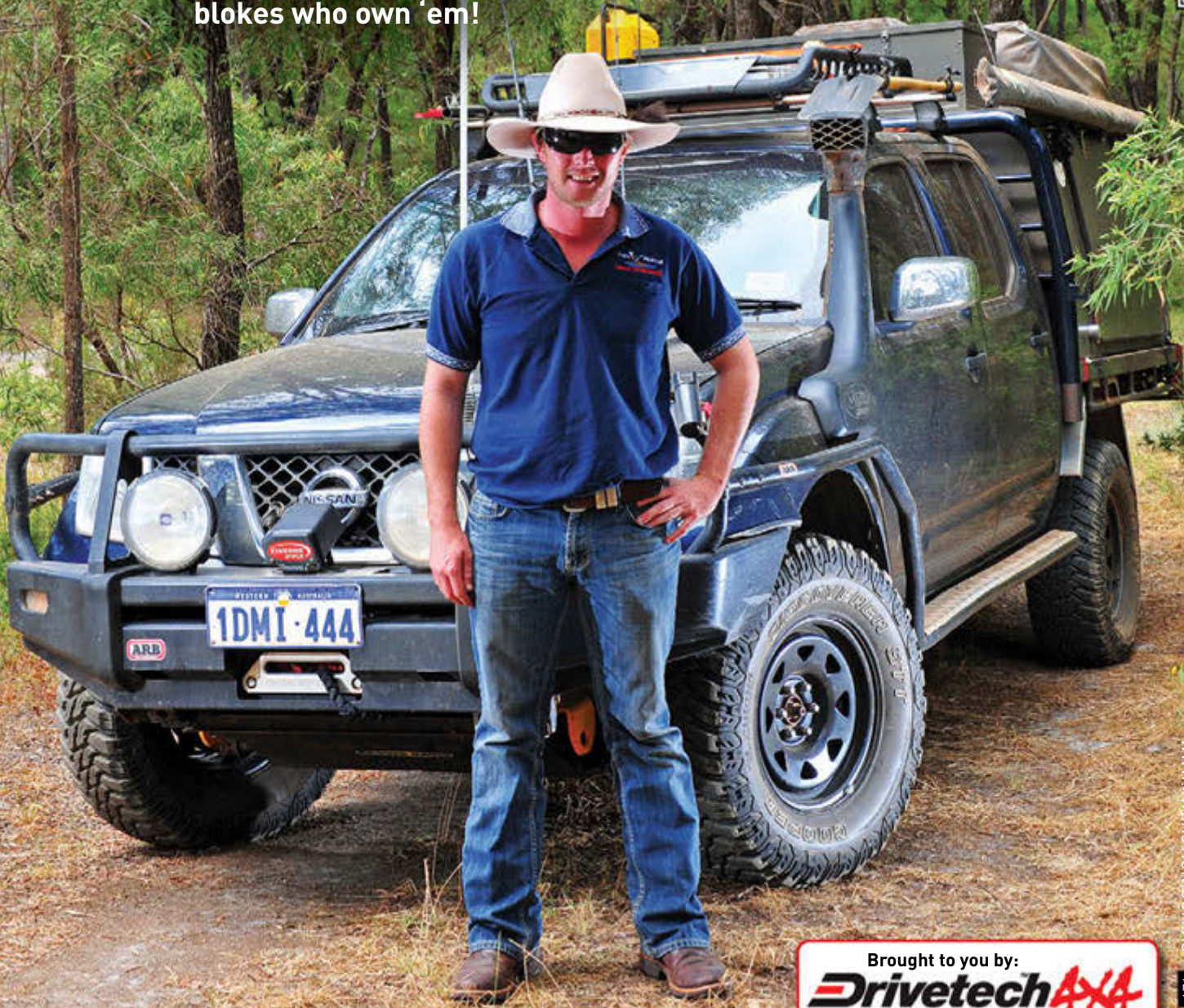
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- Cost-effective for the weekend warrior



- Known clutch issues
- Soft rear suspension



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If you're looking for a ute you can use for work, but still drag through the mud on the weekend, there's not a lot that stacks up next to the big D40 Navara.

With their solid petrol and diesel V6's and in-line 4 cylinder diesel donks, the Nav's have a fair amount of grunt to throw around. Couple that up with the

7 speed auto in the ST-X 550 and you've got a solid platform for an all-rounder.

But, like all 4WDs, they've got their weaknesses too. What goes wrong with them, and what are the tricks to getting the most out of 'em? To find out, we caught up with a few blokes who've built up some tough as nails Navaras and Ben Lavis from Drivetech 4x4.

IS THIS 4WD FOR YOU?

Being an IFS front truck, the D40 handles exceptionally well on the black top, and even better in the scrub. It just needs to be driven a little more carefully and the driver a little more picky of the lines they take. Easy and cheap suspension upgrades and engine components make it a solid base to start from, and a comfortable and capable all-round tourer.

HOW TO HAGGLE AND BUY A BARGAIN

WHAT TO LOOK FOR WHEN SHOPPING FOR A D40 NAV

BONNET LOCK RECALL

Nissan recalled the D40 Navara for an issue with the bonnet latch. A run of the Navaras had an issue with the latch popping over hard corrugations. Nissan has resolved this issue with a latch strap, which you attach to the front apron whilst putting the bonnet down. Get in touch with Nissan and see if yours is in the run that has this issue and is under the current recall. Some of the R51 Pathfinders were also recalled for the same issue.

WHAT TO LOOK FOR

Get in touch with your local Nissan Dealership and have them run the VIN number to see if your Nav is effected under the recall.

COST TO GET IT FIXED

Being a recall, whether you've bought this new or used, Nissan will cover the costs of the strap and labour under the recall scheme.



CLUTCH FAILURE

Making the D40 a little easier to drive, Nissan has equipped the D40 with a dual-mass flywheel and softer clutch pressure plate. With some clutches in the D40 having worn out within 15,000km due to the softer pressure plate and flywheel warping. Ensure that the clutch bites well, and the pedal is smooth the whole way to the floor. It appears that Nissan have fixed this issue as there hasn't been as many issues with the later model D40s.

WHAT CAUSES THE ISSUE

The dual-mass flywheel is essentially two thinner flywheels joined with a rubber matt between them, which takes up some of the shock when operating the clutch. The rubber matt has been known to split, and also as the two flywheels are thinner than a single flywheel, they are susceptible to warp due to the heat.

COST TO GET IT FIXED

Typical costs for a new dual-mass flywheel and a heavier duty clutch kit is north of the \$3000 mark including labour. However there is a standard single mass flywheel conversion available from Drivetech 4X4, which should set you back about \$2000 with a heavy-duty clutch kit.



THROTTLE LAG

The YD25 4-cylinder has been known to be a little slow on pick up with the drive-by-wire throttle setup. Installing a Windbooster throttle controller will help stop any lag. The system is plugged into the drive-by-wire plug at the top of the throttle pedal, with a control module you can mount on the dash for different throttle modes.

WHAT TO LOOK FOR

If you find the D40 to be a little slow on pickup and a moments hesitation between throttle input and engine response, it might be worth looking into one of these solutions.

COST TO GET IT FIXED

You can pick up the Windbooster throttle controller for around the \$200-\$250 mark, and installation is simple plug and play.

ESSENTIAL MODS AND UPGRADES

SUSPENSION LIFT

2in lift and a set of decent 33in rubber will get you up in the air running tracks with the best of 'em, but still keep good on-road characteristics and use as a work horse.

HOTSIDE TURBO PIPING

It's worth thinking about fitting an aftermarket hot-side intercooler pipe as the factory pipes have a habit of perishing, and being somewhat restrictive. It will make the Nav boost smoother and the pipe will never blow out.



EXHAUST SYSTEM

An aftermarket exhaust system is a must for the D40s as the factory systems are restrictive. A full three-inch system on the 2.5L four-banger from turbo back is the order of the day. Making sure the system starts at the turbo instead of the bottom of the dump pipe ensures he gets maximum exhaust flow, as some of the factory dump pipes are very restrictive.



UNDERBODY ARMOUR

For underbody protection it's worth fitting up an aftermarket bash plate under the front diff, sump and gearbox. This is invaluable for when out rock crawling, to save you dinting or puncturing anything under the front of your truck. Drivtech 4x4 have just released a range of underbody armour in partnership with Rival that is more than tough enough for the job.



WHAT MOD CAN'T THE TRUCK LIVE WITHOUT?

Most people think if you have a factory fitted snorkel the air intake system is water tight, which is rarely the case. On the outside these snorkels look the part, but it only takes a thimble of water to kill a diesel engine, and you'll find where the factory snorkel passes through the inner guard there is only foam there to seal it. The best thing to do here, is to remove the foam, and get it sealed up nice and tight with some silicone, or replace it from the airbox with an aftermarket snorkel. Drivetech 4x4 have a new range of Safari Snorkels that are definitely worth checking out.

NEXT LEVEL MOD

After you've completed the mandatory suspension lift, one of the best mods you can do is a replacement hot side hose from your turbo to your intercooler. The factory pipes are somewhat restrictive and have a habit of blowing out. Not something you want to happen when out on the tracks. This mod will get your truck breathing just that much better, and more reliable for those long trips away from home and civilisation.



ADVICE FROM THE OWNERS

We spoke with Tim Mundt, Scott McGeachie and Chris Hole, all owners of built D40s for some tips, tricks and ideas on how to modify your D40 to outwheel a HiLux.

- 1** Get a throttle controller. The factory fly-by-wire throttle is slower than a wet week!
- 2** Get a hot pipe on the intercooler as soon as you can. It helps with boost and wont perish.
- 3** Use a good quality fuel filter – cheap knock offs won't hold fuel pressure and you'll need to prime the fuel system every morning!
- 4** Make sure you get the bonnet latch checked for the recall. Can be deadly if it pops up at the wrong moment.
- 5** The Spanish and Thai built models do have differences and will affect which bolt on parts you use. Specifically the bullbar mounts are different between the models, so you'll need to know which one you've got, before ordering a bar.
- 6** When you bolt up an exhaust system and install a chip, make sure you clean the Mass Air Flow sensor. They've been known to run very rich if this is not done.
- 7** If lifting bigger than 4in in the suspension, get a set of wedges to realign the rear pinion. Otherwise you'll get massive vibrations when driving.
- 8** The front diffs have weak star gears. Best way to fix them is get a locker in the front whether air activated or electric as soon as you can.
- 9** The rear LSD in the D40 are a solid unit, however after a bit of abuse the clutch packs have been known to wear. A quality diff workshop will be able to build it up nice and tight for you.
- 10** There are two rear diff centres used between the models of the D40 – keep this in mind when ordering gear sets or lockers.

WHAT YOU SHOULD PAY

2007 NISSAN NAVARA D40 DUAL CAB RX
2.5L TURBO DIESEL: \$16,000 – \$18,600

2009 NISSAN NAVARA D40 DUAL CAB ST-X
2.5L TURBO DIESEL: \$19,900 – \$22,500

2012 NISSAN NAVARA D40 ST-X 550
3.0L TURBO DIESEL: \$38,900 – \$42,600



SPECIFICATIONS

ENGINES

PETROL:

- 3954cc DOHC V6
198kW @ 5600rpm/385Nm @ 4000rpm

DIESEL:

- 2488cc DOHC common-rail
128kW @ 4000rpm/403Nm @ 2000rpm
106kW @ 4000rpm/356Nm @ 2000rpm (Single cab models)
140kW @ 4000rpm/450Nm @ 2000rpm (2010 – on)
- 2991CC DOHC common-rail
170kW @ 3750rpm/ 550Nm @ 1750rpm

TRANSMISSIONS:

MANUAL – Six-speed

AUTOMATIC – Five-speed

AUTOMATIC – Seven-speed (ST-X 550 only)

SUSPENSION:

FRONT – Double wishbone – coil over struts, anti-roll bar

REAR – Leaf springs, rigid live axle

BRAKES:

FRONT – Ventilated discs

REAR – Leading and trailing shoe drums

TOWING:

3000kg max (braked)

FUEL CAPACITY:

80L

DIMENSIONS/CAPACITIES:

HEIGHT: 1895mm

WIDTH: 1767mm

LENGTH: 5220mm

GROUND CLEARANCE: 190mm

KERB WEIGHT: 1850kg

GROSS VEHICLE MASS: 2805kg (2860kg – ST-X 550)



PARTS & SERVICING WITH **Drivetech 4x4** driven by quality

In the market for a D40 Navara? They're tough-as-nails tourers, but there are a couple of bits of gear they'll need that are worth knowing the price of, so you can haggle the asking price down. Here are the most common bits of gear that Ben at Drivetech 4x4 says are sold for the D40:

HEAVY DUTY SINGLE MASS FLYWHEEL CONVERSION: from \$2,060

CLUTCH KIT (DUAL-MASS, 2.5TD): \$750.00

WATER PUMP (2.5TD): \$155.00

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FILTER KIT (06-ON, SPANISH-BUILT): \$91.00

FILTER KIT (06-ON, THAI-BUILT): \$81

FUEL MANAGER KIT (ALL MODELS): \$309.00

REAR WHEEL BEARINGS (ALL MODELS): \$180.00ea

SUSPENSION LIFT KIT: from \$1,345.

RIVAL UNDERBODY ARMOUR KIT: \$889

SAFARI SNORKEL: \$420

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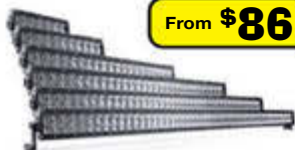
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Comprehensive fitting instructions for the DIY owner.

- Reduce Maintenance Costs
- Reduce Drive Line Backlash

80 Series 90-94

80 Series 94-98

100 Series all coil

100 Series IFS

Overhaul Kit 100 Series - 2 CV Joints, all Gaskets & Seals, 4 Swivel Bearings.....\$325

Overhaul Kit 80 Series - 2 CV Joints, all Gaskets & Seals, 4 Swivel Bearings.....\$295

** Regularly reported by users 14-16%



Original & Replacement Parts

PART TIME KIT ONLY

*\$498

*\$548

*\$579

*\$623

PART TIME KIT & LOKKA COMBO

*\$883

*\$958

*\$1008

*\$1091

Save Fuel

* With HD Hubs

Long Range Fuel Tanks

4WD Systems manufactures one of Australia's widest ranges of high quality replacement, auxiliary fuel tanks for 4WD vehicles. Designed to achieve the largest fuel capacity in the available space without compromising ground clearance, off-road performance or ease of installation. All tanks have magnetic drain plug for extra cleanliness, fullywelded structural baffles for strength, 3 year structural warranty.

25 YEARS TANK BUILDING EXPERIENCE

Australian Manufacture



ALSO

AUXILIARY & LPG Conversion

Replacement TANKS From \$865

See Web Site for Vehicle List

Suspension Kits

Various Heights available to accommodate different tyre sizes and load carrying requirements. Call or Email us for advice & recommendations.



2" or 3" Coil/Coil

GQ, GU, 80, 100 Series, Discovery, Defender, (4, 5, 6" POA)

35mm Nitro Gas

2 Yr Warranty

41mm Foam Cell

3 Yr Warranty

\$694

\$860



2" Torsion Bar/Leaf

Hilux 97-04, Triton -05, Nav D22, Jackaroo -91, BT-50/Ranger, Rodeo

\$1195

\$1360



2" Leaf / Leaf

L-cruiser 40, 45, 60, 75, Hilux, MQ Patrol (4" POA)

\$1295

\$1460



2" Strut / Leaf

Nav D40, Hilux 05-on, Triton 06-on, Colorado, Ranger PX

\$999

\$1295



2" Strut / Coil

Prado, Pajero 00-on, Pathfinder 05-on, 200 Series

\$649

\$895



2" Coil / Leaf

Landcruiser 76, 78, 79, GU Ute (4" POA)

\$1144

\$1445

Free Delivery Most Places

Complete Kit includes Greaseable Shackles, Pins, Poly Bushes, U-Bolts, Torsion Bars, Leafs, Coils, Struts, Shocks - as Applicable.

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100% Positive Locking Automatic Differential for The Ultimate in Off Road Traction and Great On Road Handling

Simple DIY Installation. Double your Off Road Performance with just one Lokka. Smooth Automatic Operation for uncompromised steering, Tough, Durable & Reliable.

Many Other Models Available

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LCR 75, 80, 100
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Hilux, Surf, 4Runner
Patrol MQ, GQ, GU
Pathfinder R50, R51
Navara D21, D22, D40
Courier, Bravo, B260
Jackaroo, Rodeo
Pajero, Triton, Challenger
Liberty, Cherokee, Grand, Wrangler
Others:- Explorer, Ford 8.8, Ford 9, Musso, Terracan

Now Available Hilux 05-on Front & Rear

Check Our Web Site for Complete List

"Over the last 26 years we have designed & developed a range of practical, stylish accessories at competitive prices. Fitting instructions available for most products, but if you need help with your installation we invite you to call and speak to someone involved in the design, development and fitting of our products."

TOM HEWITSON

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4WD Systems #91



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AVA is your go to performance software tuning company for all aftermarket tuning needs on your petrol or diesel vehicle. Australian owned and run, we write software especially for the Australian conditions and the needs of fellow 4WDers. Whether you tow, cart tools, mud bash or cruise the beaches, our dealer network is geared up to get you back on the road faster than ever... In more ways than one.



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Simply add 3-4 drops of Polaris Nanoshield to the green applicator and distribute evenly - one small section at a time. Allow product to settle on paintwork for around 20 minutes - then buff off with the microfibre cloth to a lustrous shine. Thus sealing and protecting your vehicle's paintwork.

What is Nanotechnology?

Nanotechnology is used within many fields such as science and engineering. In a nutshell, it is the study of extremely small particles conducted at 1 to 100 nanometres; this is referred to as the Nanoscale. These particles are so small that they cannot be detected under a normal microscope. These small nanoparticles bond with your vehicles paintwork, sealing the pores and creating a hydrophobic layer. As a result the hydrophobic layer repels harsh environmental elements that can potentially ruin your paintwork. By incorporating nanotechnology, the Polaris Nanoshield gives your vehicle superior paint and UV protection whilst also giving restoring it to a lovely showroom mirror shine.



POLARIS
NANOSHIELD
Vehicle Paint Protection
Interior Protection

KIT A

- Paint Protection/
Mirror-Shine



\$55
+p/h

DIY KITS for your Car/4WD



\$85
+p/h

KIT B

- Used with any of the other kits for the removal of contamination and light oxidation (heavy oxidation may need professional removal)

KIT C

- Paint Protection/
Mirror-Shine
- Glass Protection
- Fabric/Carpet
Protection



\$130
+p/h



KIT D

- Paint Protection/
Mirror-Shine
- Glass Protection
- Carpet Protection
- Leather Protection

\$165
+p/h

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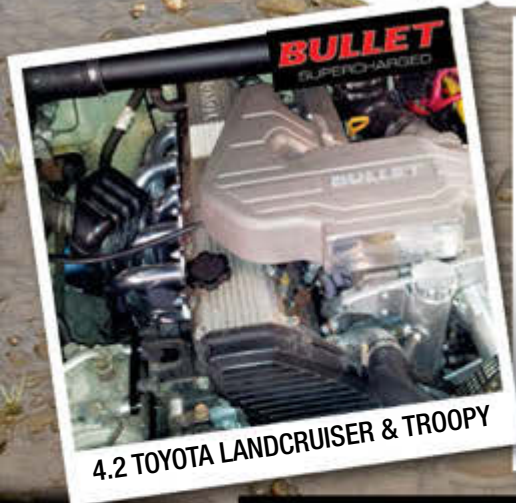
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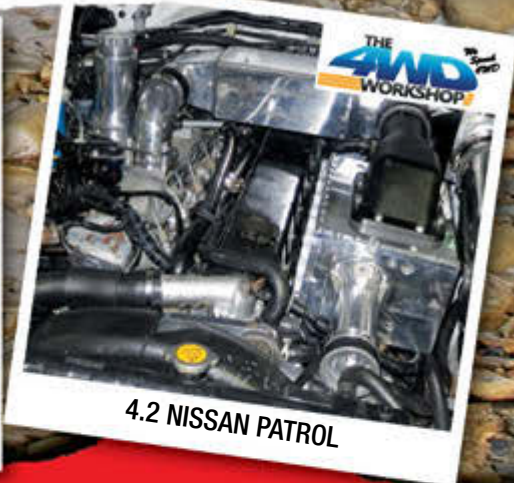
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BUILD YOUR DREAM SHED

Check out how to build
the ultimate shed without
breaking the bank!

WORDS BY DANIEL REBER PHOTOGRAPHY BY 4WD ACTION




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Any red-blooded 4WDer worth their weight in snatch straps has, at one time or another, fantasised about building their dream workspace – their ultimate shed. No matter how much space you've got available there's no excuse to be working in a rubbish heap,

surrounded by mismatched tools and parts strewn half way to Bourke. With a few choice bits of kit, any DIYer can build a neat and functional shed without putting too much hurt on the leather in their back pocket.

Here's our list of 10 items that no 4WDer's shed should be without. 

WORK BENCH

The foundation of any cracking shed is a solid work bench and vice. With the addition of a backboard for storage containers, the workspace is kept clean and clutter-free. A basic bench surface made from high density materials, able to cop a flogging will set you back around 300 bucks. For a larger bench, with a back-board for storage containers, look to spend about \$500 and if you're after the granddaddy of work benches, set your sights at the \$120. If you're serious about your shed then outlaying the coin on a serious bench set up will be worth the investment. A do-it-all bench vice should run you about \$200



\$300 - \$1500

WHAT TO LOOK FOR

- ☐ 500kg+ load rating
- ☐ Modular construction for further expansion
- ☐ Minimum 1200mm long workspace



FIND THE RIGHT...

- Workbench
- Drawers
- Toolbox
- Welder
- Grinder
- Parts Washer
- Air Compressor and Hose Reel
- Hardware
- Bench Light
- Trolley Jack and Axle Stands

PARTS WASHER

There are more shapes and sizes for parts washers than you can shake a stick at and having one in your arsenal is crucial when tearing down and rebuilding filthy components. If you're only handling small parts then you can get by with just a more compact 20L wash basin for around \$80, whereas if you're washing large parts then look to spend around \$150-\$250 depending on overall size. There are also wall mounted units available, which are a huge help if you're limited on floor space.

WHAT TO LOOK FOR

- ☐ 100L/hour flow rate
- ☐ 10L+ fluid capacity
- ☐ Depending on your available space, look for a free standing unit



\$75 - \$250

MIG WELDER

Having the equipment to run your own welds can save you truckloads of cash. For a once-off outlay you'll save stacks in the long run by not having to pay someone each time you need something welded. Now, if you're going to use your welder occasionally for dead-simple jobs, then the lower price range welders will get you by without a hassle. However, if you plan on building your own barwork and really getting creative with thicker metal, look for a 200amp plus unit, preferably a gas version as the wire burns hotter creating a better weld – look to spend about \$1000. Also, make sure that you're not overloading your house's amp rating when selecting a welder – some large units require multi-phase power.



\$400+

WHAT TO LOOK FOR

- ☐ Amp Rating: 150A+
- ☐ Duty cycle 20-40% @ Maximum amperage
- ☐ Gas/Gasless options

LIGHTING

There are few things more important to a shed than proper lighting. If your shed space doesn't have particularly bright ceiling lights, upgrade them, and then invest in a quality bench light. If you regularly work with very small parts, then consider a bench light with a magnification lens which will set you back around \$150. For a quality LED bench light, look to spend around \$130.

\$100 - \$180



WHAT TO LOOK FOR

- ☐ If funds allow, an LED bench light will provide a cooler, cleaner light

TOOL CABINET/ROLL CAB

A proper tool chest or roller cabinet is essential for the serious DIYer. Having everything organised and in its place means the right tool for the job is always close at hand. Your tool collection, or how many tools you need in your shed, is going to affect how much you need to spend on a tool cabinet. The lower end of the price range is going to get you a small, bench-top sized chest, while a full size professional roll cab will set you back around a grand.

WHAT TO LOOK FOR

- ☐ Lockable drawers
- ☐ Ball bearing slides for drawers
- ☐ Powder-coated exterior

\$90 - \$1600





AIR COMPRESSOR AND HOSE REEL

Having the ability to run air tools can make life much easier on any project. When shopping for an air compressor, tank size and power will be a factor. If you're running tools like air grinders, rattle guns and saws, then a compressor with a larger air tank will give you more air flow before depleting the tank and a higher rated motor will get it back up to pressure faster. The cheaper units are fine for occasional use, but for the perfect 'do-all' compressor look to spend around \$800 which will get you a unit with a 2hp motor and a capacity of 45-60L.

WHAT TO LOOK FOR

- ☐ 45L+ capacity
- ☐ Thermal overload protection
- ☐ 1hp+ motor
- ☐ Wall-mountable hose reel

RETRACTING HOSE REEL
\$90 - \$300

AIR COMPRESSOR
\$250 - \$1000+



BENCH GRINDER

One tool you'll be glad to have in your shed is a bench grinder - a keystone of any powered bench setup. Bench grinders aren't a terribly expensive piece of kit, given their simple mechanical nature so you'll be able to nab one from around the \$100 mark which realistically should do the average bloke just fine. If you're in need of something a little more industrial, perhaps with a finisher, then look to spend around the \$500 mark and you'll be laughing.



WHAT TO LOOK FOR

- ☐ 600W+ motor
- ☐ 200mm+ wheel diameter
- ☐ Sturdy mounting base
- ☐ Adjustable eye shields

\$100 - \$500



FASTENERS AND CONSUMABLES

BUDGET FOR
\$100+

The correct assortment of washers, O-rings, pins and so-on can really make or break your ability to complete a job easily. Sure, you might have a collection of rusty old washers and worn O-rings from the last 17 4WDs you've owned, but do yourself a favour; pick up a few boxes of the most common sizes for your 4WD - you'll be glad you did. You can pick up 100 packs of each from around \$25, so budget \$100-\$150 and stock up for the next year's projects.

WHAT TO LOOK FOR

- ☐ O-rings, hose clamps, cable ties, sealing washers, snap rings
- ☐ Selections that carry most of the common sizes for your 4WD

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LOOK**

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TROLLEY JACK AND AXLE STANDS

This is not an area to skimp on costs. A quality jack and axle stands won't cost you the earth, however, low quality items here could cost you your life. A sturdy hydraulic trolley jack will run you around \$300 for a two tonne unit, and a pair of tough axle stands about \$150 for a pair of 4.5T stands – both are perfectly fine for a large 4WD.

WHAT TO LOOK FOR

- ☐ 3000kg+ capacity with axle stands
- ☐ 1500kg+ capacity for trolley jack
- ☐ Hydraulic jacking mechanism
- ☐ Ratchet mechanism for axle stands – pin-type stands can be clumsy to adjust

\$300 - \$500



RECKON YOU'VE GOT THE ULTIMATE SHED?

Reckon you've got a jealousy inducing man cave or shed? We'd love to see it, so shoot through a pic of your cracking setup to editorial@4WDAction.com.au

SHELVING

When it comes to organising the remainder of your shed, a sturdy shelving unit will keep the rest of your gear organised, clean and in good nick. Shelving units are pretty simple and you'll be able to pick up a solid unit with 350kg rated shelves for anywhere between two and three hundred bucks, depending on the size you're after.

WHAT TO LOOK FOR

- ☐ 300kg+ shelf rating



\$200 - \$300

FROM SHED, TO MAN-CAVE!

Let's face it; working on your 4WD can be thirsty work and having a bit of space to kick back and admire your efforts is almost mandatory. If you've got the space, here's a couple of extras you can add to turn that dream shed into the ultimate man-cave!

WE'D ADD:

- Small bar fridge under the workbench (you'll never be short of a helping hand!)
- Comfortable seat, or even a small sofa if space allows
- A small television for keeping an eye on the footy scores
- Portable, job site radio
- Small heater for those cold winter nights and a fan for the hotter ones

CONTACT

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APW-14 Auto Parts Washer
- Wall or Bench Model (A369)

HOT PRICE
\$189



TBRS-25 Manual Tube Bender
Round & Square (T095)

HOT PRICE
\$195



Bench Vices
100mm (V088)

\$69

127mm (V089) **\$115**



152mm (V090) **\$159**

HJ-2DS Hydraulic Garage Jack
- Low Profile 2 Tonne (J041)

HOT PRICE
\$259



MORE SPECIALS ONLINE

TURN YOUR SHED

Hex Keys with Ball End

- Long Series
- 9 Piece
- Imperial Set (H800)**
- 1/16 - 3/8"
- Metric Set (H801)**
- 1.5 - 10mm

~~\$16.50~~
\$14 EACH
(H800 / H801)



GSP-795 Pneumatic Round Stool

- 675-795 seat height
- Ø360mm padded leather seat
- 360° seat rotation

~~\$90.00~~
\$89
(A359)



EF-5S Engineers File Set - Second Cut

- 200mm hardened and tempered files
- Second cut: Flat, 1/2 Round, Round, Square, Triangular
- Includes carry case

~~\$38.50~~
\$33
(F100)



FD-45 Industrial Fan

- Ø450mm 3 blade design
- Swivels 90° inside frame
- 3-speed control
- 180W, 240V motor

~~\$90.00~~
\$79
(F026)



PDS-2B Bush Driver Set - 17 piece

- 17 Piece Bush Driver Set
- 10 - 42mm

~~\$46.20~~
\$39
(P030)



MCW-40 Mechanic's Creeper

- 6 swivel wheels
- Fabricated steel frame
- 1000 x 430 x 100mm

~~\$40.50~~
\$39
(A362)



PDS-3BS - Bearing Race & Seal Driver Set - 10 piece

- 10 Piece Bearing Race & Seal Driver Set
- 39.5 - 81mm

~~\$64.90~~
\$55
(P031)



PP-10HD Workshop Hydraulic Press

- 10 Tonne
- 180mm ram stroke
- Adjust. ram position

~~\$330.00~~
\$309
(P141)



APW-76 Auto Parts Washer Floor Model

- 76 litre tank
- 180L/hr, 240V pump
- Safety fusible lid

~~\$169.50~~
\$139
(A368)



APW-14 Auto Parts Washer Wall or Bench Model

- 14 litre tank
- Wall or bench mount
- 114L/hr, 240V pump
- 545 x 650 x 630mm

~~\$209.00~~
\$189
(A369)



WDV-30L - Industrial Wet & Dry Vacuum Cleaner

- 1000W 240V motor
- Portable on wheels
- 30L stainless steel tank
- Include: brush, crevice tool, wet & dry floor nozzle

~~\$220.00~~
\$199
(V503)



HES-907F Engine Stand

- 907kg load capacity
- 5 swivel castor wheels
- Fold-up legs

~~\$187.00~~
\$169
(A340)



VJ-680 - Hydraulic Vehicle Positioning Jacks

- 680kg hydraulic lift per jack
- 270mm max. tyre width
- 620mm max opening

~~\$286.00~~
\$269
(A332)



HJ-16DA Hydraulic Garage Jack - Low Profile

- 1.6 tonne capacity
- Alloy construction
- Dual pump system
- 95-490mm lift height

~~\$385.00~~
\$369
(J043)



PTB-24C Parts Bin

- 444 x 222 x 642mm
- 10kg load per bin
- Clear window to identify parts
- Includes 24 bins & dividers

~~\$220.00~~
\$209
(T7955)



WCH-6D + WRC-5D Workshop Series Tool Chest & Roller Cabinet Package

- Ball bearing slides
- Protective drawer liners
- Key lockable

WCH-6D (T690)

- 6 drawer tool chest
- 600 x 260 x 340mm

WRC-5D (T695)

- 5 drawer roller cabinet
- 616 x 330 x 762mm

~~\$308.00~~
PACKAGE PRICE ONLY \$279 (K004)



HPC-1T Pneumatic & Hydraulic Engine Crane

- 1T lifting capacity
- Hydraulic & pneumatic
- 2300mm lift height

~~\$341.00~~
\$319
(A351)



AL-51G Bench Lathe

- 230 x 500mm turning cap.
- 20mm spindle bore
- Quick change gearbox
- Speeds 100-1800rpm
- 0.55kW, 240V motor

~~\$1,419.00~~
\$1,349
(L160)

ST-51G Lathe Stand

~~\$297.00~~
\$249
(L263)



Specifications & Prices are subject to change without notification. All prices include GST and valid until 15-04-15

INTO A WORKSHOP

WBS-3D Steel Work Bench

- 2000 x 640 x 870mm • 3 Lockable drawers
- Bearing slide drawers
- Huge shelf compartment

~~\$429.00~~

\$409

(A380)



3 LOCKABLE DRAWERS

ETT-1D Steel Engine Tear Down Table

- 1220 x 710 x 970mm
- Fluid collection pan
- Adjustable shelf

~~\$319.00~~

\$295

(A385)



LOCKABLE DRAWER

SDC-2D Steel Service Cart

- 930 x 530 x 955mm
- Key lockable top table
- Ball bearing drawer slides
- 4 wheels (2 with swivel & brake)

~~\$319.00~~

\$295

(T754)



BG-8 Industrial Bench Grinders

- 200mm wheels • Fine/coarse grit
- Safety stop switch • 1hp motor



240V

~~\$297.00~~

\$275

(G161)

415V

~~\$297.00~~

\$275

(G161A)

3-in-1 Pressbrake, Guillotine & Rolls

- Cast iron construction
- Handle operates all functions
- Segmented pressbrake top blade

CM-300

300 x 1mm

~~\$352.00~~

\$329

(S648)

CM-760

760 x 1mm

~~\$726.00~~

\$669

(S650)



GSK-3 Gravity Feed - Spray Gun Kit

- HVLP spray gun system
- Standard pot with 1.7mm nozzle
- Small pot with 1.0mm nozzle
- Pressure regulator with gauge

~~\$110.00~~

\$99

(S344)



RP7834 - Air Tool Kit

- 1/2" impact gun
- 1/4" die grinder
- 3/8" ratchet wrench
- Air hammer & chisel set

~~\$198.00~~

\$180

(A053)



RST-4T Flexi-Rack Wood Shelving

- 1040 x 430 x 1830mm
- 455kg per shelf
- Adjustable shelf height
- Can set up as work bench

~~\$198.00~~

\$179

(S013)



455KG PER SHELF

RAV2.75/36 Air Compressor

- 205 L/min pump
- 36 litre tank
- 100psi pressure
- 2.75hp, 240V motor

~~\$396.00~~

\$379

(C327)



SC-1800 Industrial Storage Cabinet

- 900 x 450 x 1800mm
- 150kg shelf load cap.
- 75kg drawer capacity
- Made from reinforced metal

~~\$748.00~~

\$699

(T762)



drawer compartments



mechanical lock drawers

IWB-12 - Industrial Work Bench, Backing Panel & Storage Accessories Package

- Bench (1200 x 750 x 900mm).....(A415)
- Backing Panel.....(A416)
- 4 x Single Prong Hook.....(A440)
- 4 x Double Prong Hook.....(A442)
- 1 x Triple Prong Hook.....(A444)
- 1 x Spanner Holder.....(A446)
- 1 x Screw Driver Holder.....(A448)

Plastic Buckets

- 4 x (110 x 105 x 50mm).....(A430)
- 4 x (140 x 105 x 75mm).....(A432)
- 6 x (220 x 140 x 125mm).....(A434)

~~\$629.20~~

PACKAGE PRICE ONLY \$549

(K042)



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WORDS BY CAHN TURNER, PHOTOGRAPHY BY WES WHITWORTH ➔

BORN AGAIN

After a full rebuild that didn't work out, Jamie converted his V8 HiLux back to a diesel – then gave the old 'Lux the makeover it deserved!

- Full chassis and body strip and rebuild
- 1KZ-TE engine and driveline swap
- Bundera / 80 Series coil front conversion
- Custom owner-fabbed barwork, tray, exhaust and intake

We all know a bloke who has bought that truck that seemed like a bargain: 95% complete, few minor issues, will be awesome once it's finished! But too often we hear horror stories about these projects that end up burning their new owners. Jamie Parker's HiLux burnt him, but born out of the ashes was a whole new beast.

"I'm a fan of V8s and the HiLux seemed perfect," Jamie tell us. "It had a few modifications, some 31s, a 2in lift and of course the 1UZ-FE under the bonnet. I have always loved the older HiLux models and this one was an Xtra cab which offered that little bit more space."

It wasn't long before Jamie was chasing issues and decided to pull the V8 for a rebuild. "I bought a written off 2001 HiLux," Jamie explains. "I planned to swap the motor into my old truck but decided to clean it up a bit first". That's when the real journey began!



Tough stance is helped in no small way by the custom tray

EXTERIOR

The Lux was treated to a full body off chassis strip and rebuild and got a coat of fresh Phantom Purple paint on the panels, which is complemented by the incredible custom bar work and tray that Jamie knocked up in his shed. "I wanted the front bar to be low profile and fairly slim," Jamie explains. "If I did it again I'd probably add a little more side protection... I managed to smash a parking light on the DVD trip but I am definitely stoked with how it came out." The tray on the 'Lux is also designed with a low profile in mind, but still manages to be functional and strong. Plenty of space to store gear, with two lockable boxes, and racks to suit a rooftop tent means that Jamie is able to take his truck on tough tracks or long touring trips. The benefit of designing your own barwork means you can plan to neatly fit your accessories, we reckon Jamie has done a fantastic job of mounting his front and rear winches – and the swing-up number plate brackets front and rear are a brilliant idea.

A 22in Cree LED lightbar provides plenty of light, while up top Jamie's 'Lux is running four IPF 800 series spotties.



Rollbar-mounted rooftop tent for the longer excursions



***THE LUX WAS TREATED
TO A FULL BODY AND CHASSIS
STRIP AND REBUILD!***



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Flipped 80 Series radius
arms in the front give incred-
ible under-diff clearance



THERE AREN'T MANY LN65s RUNNING 80 SERIES SUSPENSION!

SUSPENSION AND DRIVELINE

From a distance you'd be forgiven for thinking this was a lightly modified old HiLux, but look closer and you'll start to notice all the details that make Jamie's truck stand out. Although LN65s were solid front axle there aren't many running 80 Series suspension. "I had a mate with a Bundera front diff and starting playing with the idea of fitting it to my 'Lux," Jamie says. "It meant a fair bit of research, and trial and error, before I had a fully functioning set-up." And what a set-up it is! The Bundy diff has been stuffed with an 80 Series diff centre, which Jamie has upgraded with a Prolocker. Although the Bundy diff is a high pinion unit similar to the 80 Series, the 80 has larger pinion bearings and so it's a fairly easy mod to increase strength. Pair that with the Trail Gear Longfield CVs that are in the front end and it shouldn't have any troubles dealing with tough 4WDing.

"I went with a Bundy front diff housing as it has an identical track width to the HiLux," Jamie points out. "Then it was a matter of welding some 80 Series spring mounts and shock towers to the 'Lux chassis and making a few other changes. I flipped the 80 Series Radius arms and welded them to the top of the housing for extra clearance, but if I was going to do it again I'd probably use 79 Series gear. It's tougher and a better design in my opinion."

The modifications don't stop there. Jamie fitted the 2001 HiLux IFS hubs to the Bundy diff meaning he could run the modern four-pot brakes. By moving the calipers to mount on the opposite side of the hub, and using 60 Series rotors he upgraded to vented discs and larger calipers. By running IFS hubs Jamie has also gained about three inches in track width, which means his HiLux performs a whole lot better on the rough stuff.

Up the back the HiLux has had a similar treatment, this time the diff has been swapped in from the wrecked 2001 model meaning Jamie has a bolt in brake upgrade with the added bonus of wider track width. The leaf mounts were moved to suit the longer leaves, "It's much more comfortable with the longer leaves and they flex better than the original ones," Jamie tells us. "I have plans to convert the rear end to coils too though. I've started by cutting all the mounts off a GQ diff and extending the links to suit the HiLux. The plan is for a triangulated four-link." Mate! Keep us posted, we're keen to see how it all comes along!



UNDER THE BONNET

Ideally Jamie would have liked to stay with the Lexus V8 that was living under the bonnet when he bought the HiLux but after a couple of weeks it was developing a pretty serious bottom end knock so he pulled it out with the intention of a full rebuild. "I had issues trying to find a replacement crank," Jamie explains. "By the time I had sourced one, the 'Lux was getting treated to a full body and chassis strip and rebuild." Once it was all back together there were still troubles getting the motor to run correctly and when the written off 1KZ-TE HiLux came up for cheap it was a no-brainer. The torquey three litre bolted straight in and fired up easily using all the factory Toyota bits and pieces. "I used the motor, gearbox, full body wiring loom and dash in the conversion," Jamie tells us. "It was all plug and play with no teething issues and I've been incredibly happy with it. It's slow compared the V8 but has been very reliable."

The neat custom stainless snorkel and intake pipe was fabricated by Jamie's dad who is pretty handy with a welder thanks to being a qualified alloy boat builder. The 3in exhaust is also a custom job that Jamie and his dad knocked up in the shed. Not bad at all mate. "The only thing I'll probably do to the 1KZ now, is chip it," Jamie reckons. "Come to think of it the only other thing I needed to do for the swap was throw together a few different steering components – I ended up using a hybrid of the HiLux steering column and a 60 Series power steering box, which meant it would clear the panhard bar."



After his 1UZ developed a rod knock, Jamie ripped the V8 out in favour of a diesel



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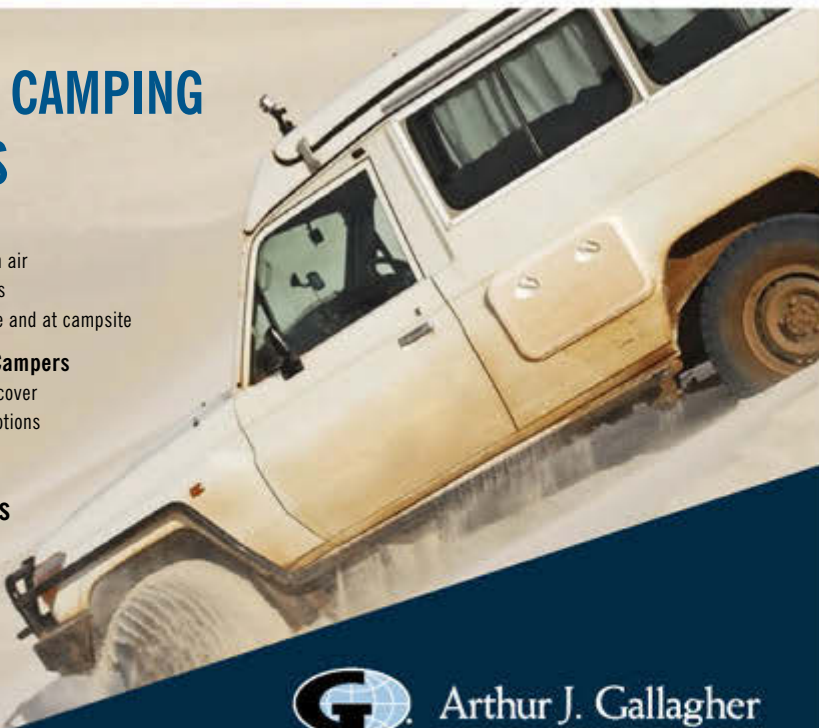
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INTERIOR

Jamie's 1985 'Lux has been brought into the 21st Century thanks to the installation of the complete later model dash and Nissan Skyline bucket seats. "I had to use the support panels from the 2001 HiLux to mount the newer dash," Jamie shows us. "It was about 5mm too wide as well, but I made it fit! I didn't fit the Skyline bucket seats but I am definitely happy with them – they are comfy and offer a whole lot more support than the factory seats."

Jamie has also installed the usual 4WDers wishlist, a GME UHF, Clarion touch screen DVD player and Kenwood 6x9s as well as the all-important Pyro and boost gauges which were installed to keep an eye on the vitals of the diesel four-banger.



Entire late-model Lux dash was a nearly bolt-in swap and works perfectly with the new motor



RUNDOWN

VEHICLE: 1985 LN65 HiLux

ENGINE: 2001 1KZ-TE three litre turbo diesel

GEARBOX: 5 speed manual

4WD ACTIVATION: Part time, Manual

SUSPENSION: Front: custom coil conversion using hybrid Bundera / 80 Series gear, rear: longer leaves from 2001 HiLux with relocated mounts

TYRES: 37x12.5R16 Maxxis Sticky Treps

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PRO OR DIY TRANSMISSIONS?

Debating about whether or not to make that manual-to-auto transmission swap yourself? The experts at Wholesale Automatic Transmission have a thought or two on the subject that might change your mind.

When the time comes for a manual-to-automatic transmission conversion, it's tempting for many 4WDers to want and try and do it themselves. The trouble is, contemporary transmissions are highly complex and electronically fragile pieces of equipment and the margin for DIY error is wide. With sensitive electronic control systems like these, even the slightest bit of incorrect data from a sensor or a switch can result in critical failures that may not be immediately obvious the first few times you're out there driving again. Modern 4WDs cannot be repaired with duct tape and fencing wire.

Cost is one of the most influential factors that convinces a lot of home mechanics and 4WDers to attempt any installation or repair themselves. While at first glance it may look like you'll be saving some serious dollars off the top, once you begin

to calculate the cost of parts plus the risk of failure linked to the precision fitting of the sensors and connections required for trouble-free operation, the DIY route can easily become very costly, incredibly fast. The main trap with a DIY conversion isn't bolting in the new unit and making sure it fits. The tricky bit is the control and configuration of the new transmission and that's where Wholesale Automatic's investments in R&D make the difference.

There's a lot that can go wrong when even the most mechanically ambitious 4WDer decides to take transmission work into their own hands. It's easy to overlook a faulty component – even the one responsible for the initial failure – or use the wrong ATF for an application. Sensors can be connected incorrectly or missed all together and if the torque converter isn't lined back up properly, you could be adding costly additional pump damage that will require repair to your existing transmission dilemma.




Your transmission is responsible for the transfer of drive from the engine to your wheels; don't trust its service, maintenance or replacement to just anyone

Wholesale Automatic has developed different custom torque convertors to suit a variety of different engine configurations, because where a standard convertor may appear to work, it's easy for the wrong fit to begin generating too much heat which will inevitably lead to stalling.

At Wholesale Automatic Transmissions, Rocket Rod and his team have more than 30 years' experience in transmission installations, conversions and repairs under their collective work belt and while they acknowledge that a DIY solution may be one option in today's day and age, the average home mechanic should definitely be aware that it takes a lot more than just confidence to attempt a job of this magnitude. For instance, if certain parts or components aren't checked or replaced during a DIY fitting, it could compromise conditions of your transmission's warranty. Complex adjustments, ECU resetting and work with sensitive electronics that requires the use of specialised equipment may also be required and without a comprehensive shop staffed by highly-trained professionals behind your install, it's easy to find yourself alone in the garage staring at a pile of problems that weren't there when you started the job.

After 22 years in the industry, Wholesale Automatic Transmis-

sions maintains a focus on the world of 4WDs. They've even developed products of their own designed to enhance the modern 4WDers driving experience in addition to providing servicing and repairs to all types of automatic transmissions. The team at Wholesale Automatic Transmissions knows what to look for during an installation procedure and with their experience and expertise can help you avoid the kind of pitfalls that can lead to costly failures.

By offering a professional approach and finish backed up by a comprehensive warranty and dedicated after sales service, Wholesale Automatic Transmissions wants you to be sure that you understand the job and the consequences of a transmission repair or install before you attempt to try it yourself. They also want to remind you that there's no shame in getting a little help from the experts. No one is going to ask you to handover your membership to the Big Boy's 4WDers Club just because you decide to make a smart decision, treat your 4WD right and have a dedicated team of genuine transmission repair technicians make sure you -and your 4WD- get exactly what you need and exactly what you're paying for. 



With all the intricate parts and complex components involved in the performance of your transmission, the advice and handiwork of a professional is truly priceless

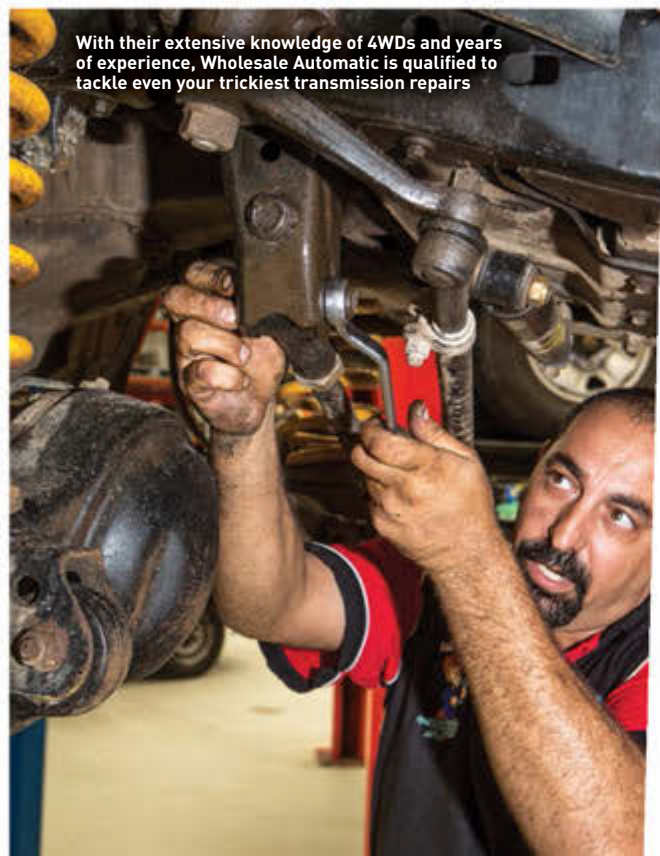
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There's nothing like the rush of discovering some perfect pocket of the Australian landscape untouched by civilisation.

If your plans include leaving the blacktop behind in pursuit of raw adventure and rarer surrounds, nothing compliments your vehicle, family or holiday more completely than a dedicated tray-back camper. Travelander has been famously outfitting Aussie's with quality camper trailers and slide-on tray-back camper options for years and by integrating luxury

accommodation with the simplicity of quick, convenient setups, Travelander's practical designs are legendary.

New for 2015, the Evron DC4 is Travelander's latest dual cab tray back camper model. Loaded with new features and dynamic functions, the Evron DC4 succeeds in delivering a fully self-sufficient camping configuration loaded with amenities and usable living space.

The Evron DC4's fully automatic system reduces setup to the opening of a few latches and the push of a single button. The camper does all the hard

work and heavy lifting for you. Inside the tent, an impressive living area is further complimented by heaps of available storage that can be accessed from either inside or outside the camper, as well as a queen-size bed accessible via a series of four steps. There's even an internal bench which can also be used as a step, allowing you to get up or down from the bed without needing to crawl over your partner.

An ensuite entry with a hot and cold shower, that includes a purpose-built shower caddy secured directly to the cubicle wall, can be accessed straight from the tent, so there's no worry about getting your feet dirty on your way in or out. LED strip lighting runs throughout the interior, providing plenty of efficient illumination while a number of lightweight options like fibreglass construction, metho burning cooking equipment and a diesel powered heating/hot water system partner to minimise the overall weight of this robust tray-back camper.

Travelander has also equipped the new Evron DC4 with a capable lithium battery system and loads of available water storage so that once you do find that treasured parcel of virgin country; you've got more than enough of the essentials on hand to enjoy your private slice of paradise.

Travelander's Evron DC4 dual-cab tray back camper includes an external shower cubicle that gives you the freedom to enjoy longer stays in even the most remote locations



Rain or shine, the Evron DC4's hardfloor interior and massive insect mesh-lined windows make it possible for you to enjoy the bush regardless of what local weather may have in store



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SERVICING INJECTORS

Why common-rail injectors are making DIY servicing a thing of the past

Once upon a time you could buy an old 4WD with a bit of a miss and rattle in the injectors, bring it home, pull it apart and more than likely you could have it running like a dream at your own hands. Sadly those days have changed dramatically. Recently we had a 4WD towed into our workshop with an issue. This was no ordinary problem as the owner had tried to work on the injectors in his common rail engine. The issue being that the owner had removed his injectors and couldn't get it running again. He had polished the injector needles and tried getting them back together again. Worse still he had been doing this work in his driveway out of a couple of ice cream containers. What started off as a simple 'pull out the injectors and clean the needles' had turned into an expensive nightmare for him. Probably lucky that he couldn't get things back together again preventing further damage to other things like his engine. If he had gotten these back together and somehow been lucky enough for the engine to start it could have created an engine failure from incorrectly operating injectors. In the end we had to install four new complete injectors and we recoded these new injectors to match the vehicle's computer. Whilst common rail injectors can be serviced by diesel experts, the success rate and service life of this is still questionable. When things have been pulled apart and bits are missing it's even worse. For now, we still state that generally a modern common rail diesel injector lasts a few hundred thousand km (excluding some problem model engines that are

quite prominent out there) and so when they are due we want them to last at least the same if not more time/distance. For more help when deciding what to do with your next injection system service contact your diesel expert for advice.

Safe Fourwheeling

Andrew Leimroth

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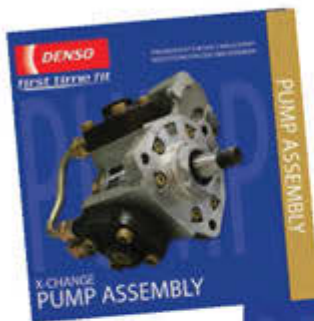
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SWAYBAR TECHNOLOGY ADVANCEMENTS

Get the most out of your suspension with this revolutionary new swaybar design

Offroading for most of us can mean a wide variety of things, from just getting a few hours away from the hustle of the city to remote outback expeditions. We all like to modify our vehicles and one of the components that is most often least considered is the swaybars, and particularly how they will work to compliment the suspension modifications we fit. With the majority of vehicles somewhere between fairly standard with a small lift setup for towing and the fully kitted out outback weapon with steel bars, winch, fridge, drawers and roof racks that may even have to drag a 20ft camper, you quickly discover that the ride and handling from the factory swaybar is not up to par.

The biggest problem in fitting upgraded swaybars is the fear of losing articulation when it's needed most, travelling on a rough track with wheels in the air hunting for traction. Rough tracks can generate a lot of body movement, and this is where a correctly sized swaybar can make for a far more comfortable ride.

Sway bar disconnects allow for the quick removal of the sway bar before travelling off road. This allows you to have the benefits of additional travel and articulation in the suspension but retain the sway bar for on road use. These are for use off road only and should never be left disconnected when on road. The key points to finding the correct style disconnect is to order ones designed specifically for your lift height, also ones that use larger diameter high tensile bar and ONLY premium rod ends with

grease nipples to ensure long life and a quiet ride.

Fitting larger (higher rate) swaybars, particularly in the rear, has two main effects, vehicle balance in terms of understeer and oversteer, and increased roll resistance. Both of these effects can provide increased overall handling and safety benefits in a 4WD.

The majority of factory vehicles are biased towards understeer, the fitment of a larger rear swaybar, can provide a more neutral characteristic in the handling. This is due to the increase in rear roll stiffness and can often help 'balance' the articulation on vehicles with radius arm or stiff IFS style front ends.

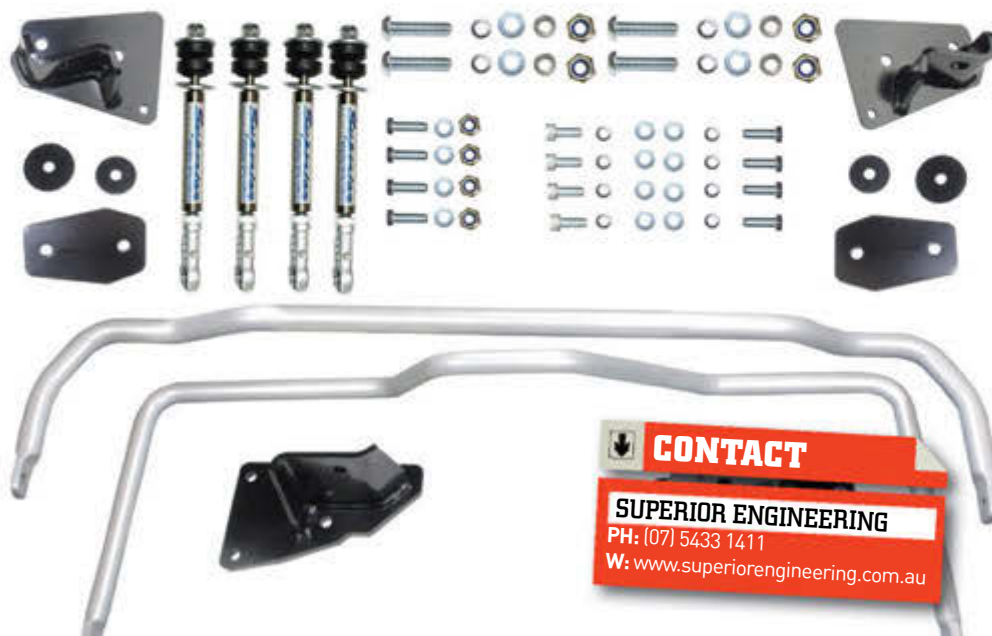
With a growing demand for increased articulation, the fitment of 'torsion bar' style swaybars is becoming more popular. This type of swaybar has a straight main bar that is splined at both ends, and has bolt on side arms that allow for

small changes in rate for fine tuning. The larger diameter bar and longer side arms reduce the amount of twist that the bar material is required to control at full flex, therefore allowing a more linear rate over longer travel. The downside apart from price is the amount of fabrication and welding often required to install. In most cases OE and aftermarket bars can only handle 25-35 degrees of twist. This is usually the limiting factor for the short armed OE bar, which is forced outside of this range once long travel shocks are fitted.

Superior Engineering has released the new 100% bolt on, Superflex Swaybar Kits to suit GQ and GU Nissan Patrols, which can match the articulation of the torsion bar type swaybars. They are specifically designed to allow full travel and maximum articulation from most suspension kits available and are perfectly suited to those vehicles that are already enjoying the

benefits of Superflex radius arms, without ever having to disconnect a swaybar again to go offroad! No more climbing on the ground and getting dirty or muddy after a day in the bush to reconnect the swaybar links. The secret to the revolutionary new swaybars for your patrol is the combination of new mounting point relocation brackets and the use of computer designed long-arm swaybars, which are capable of controlling flex in vehicles with long travel suspension. The torsion rate of the new Superflex swaybars is similar or directly compatible to the factory options currently available allowing for great onroad handling and performance.

So without reducing comfort or articulation, fitting a swaybar can offer all round improvements in handling, tyre wear, safety and load carrying. Contact your local suspension expert for advice on exactly which swaybar can suit your needs.



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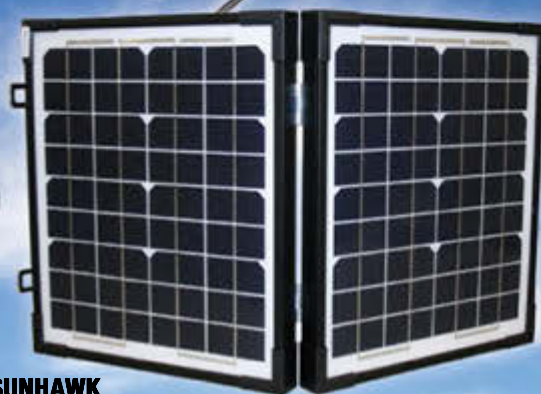
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THE 10%

Graham's had a gutful of track closure, but he's got a solution

I was listening to a stand-up comedian the other day talking about gun laws in America when he just happened to mention something in-between gags about Americans and guns that really got my attention. He said, "As a society, we have to all walk together at the speed of the slowest member."

Mr Funny Man was referring to gun laws and the concept of responsible ownership, more precisely the fact that the majority's high level of responsibility doesn't count for anything if even the smallest minority couldn't give a toss. It's that smallest minority that we must collectively be accountable for, and like it or not, he has a very valid point.

Jump forward to this weekend just gone, I spent a tremendous time camped on what is perhaps my favourite stretch of beach in the south west. The sheltered bay allows for perfect conditions in almost any wind and swell, meaning boats can be launched, abalone collected and crays dived for all year round (permits and seasons permitting of course). It really is as good as it sounds. Certainly the location is far from secret, but it is just tucked away enough that it rarely gets super busy. It does however attract, like so many places, the slowest and most reckless members of our society.

Whether we like it or not, this place that is so special to me, along with every place special to

you, must be regulated to take into account the slowest and most reckless members of our society; the responsible actions of the majority mean not a pinch if overshadowed by the slower moving minority.

Activities such as driving off formed tracks, burning and leaving rubbish in campfires, ignoring bag limits and loutish or flout-law behaviour are not those of the responsible majority, however that matters not because it's a regular occurrence by the minority. As such we must all abide by laws set to govern not the majority, but the smallest elements of the minority.

Next time there's a gate across your favourite track, your local campsite is closed, your fishing season gets shortened or you are banned from a certain beach, raise you glasses and salute that 1% that do such a great job of stuffing it up for the rest of us.

It bothers me to no end to have to accept that a knuckle dragging sub-species sets the guidelines for the way in which I must be governed. I also strongly believe that penalties currently in place for the majority of offences are way too lenient. There is ZERO deterrent for the idiots.


As a society we get angry at having to live under laws biased towards the lowest common denominator, yet nobody seems to have an issue with punishments. I firmly believe we are



too soft. There needs to be a strong and solid deterrent that makes the dumbest that walk among us stop and consider their actions. Should they be so slow as to not be able to rub sufficient neurons together to form a useful thought then the consequences of their actions should be of benefit to the majority.

Massive, long term community service sentences that involve every weekend for years at a time, working on a range of projects across society, would be of huge benefit to the public while at the same time keeping the dim witted out of

harm's way. I also feel the idea of having ones spare time taken up with rubbish removal and weed spraying for a few years for trashing a campsite would act as a fairly substantial deterrent for many.

Of course, we are dealing with the dumbest of our members here so perhaps penalties and deterrents just won't stop all anti-social behaviour. No problem, my property could do with as much free labour as I can get; go ahead and litter the beach. I'll see you at 6am on Saturday! That way I can continue to work to live while you live to work! 

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TOUGH TO BEAT



WORDS BY SHAUN WHALE PHOTOGRAPHY BY 4WD ACTION



Shauno's just ticked something off the never-ending list of things to add to the Dirty 30

Geez, it's a tough old gig working at 4WD Action. Just when you think you've got your truck setup the way you want it, some bugger sends in a photo of their truck, and it gives you an idea. "That's pretty trick – just imagine if instead of this bit here, you did this, and added that, and..." And all of a sudden, the Dirty 30 I thought was almost finished, went back into the workshop!

Since Noel and the boys up at Creative Conversions chopped the old girl into a ute, I've been running a beaut Jester Canopies canopy on the back. It's heavy-duty as buggery,

extremely well-built and houses everything I want – and then some – but she's taken more than a few hits on the last couple of tough trips. The more I keep pushing the 30 hard, the bigger the hits are gonna be, til I see myself destroying a beautiful canopy. And that's not on!

So it was over a few beers with my mate Josh at Mild2Wild 4x4 up in Hervey Bay one night that we set about drawing up the plans for a new tray. The idea being that if I had a big touring trip come up, I'd run the Jester canopy, but in between I'd stick her in the back corner of the shed and run the tough tray. Out came the texta, and literally on

the back of a beer carton we sketched out an idea.

To say I was excited, would be like saying 4WDing's a bit fun. Half an hour later we had this incredible master-piece drawn, and geez you could almost put it straight into the computer and laser-cut it straight from the sketch. As long as you didn't mind squiggly lines, a fair bit of crossed out areas and some spilled beer. Hey, it was 11.30pm after all!

Unfortunately I needed to get back home, so I left Josh with the big 30 and told him I'd call him in a week or two. He seemed pretty keen to get stuck into it, especially when I said to tell the bloke at the metal yard

to send me the bill for the metal. Now the worst part I reckon is getting the update pics come through on my phone every day or so – it looks insane, and I can't wait to see it in the flesh! Here's how she's looking so far – Josh is a gun on the end of a welder so this thing's gonna be a worth of art I'm sure.

Righto, that's enough for the time being. I've gotta go work out how to rig a couple of block and tackles in the shed so I can swap these trays back and forth...

Cheers,

Shaun.

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WORDS AND PHOTOGRAPHY BY DICK EUSSEN



BUSH HOSPITALITY

People used to help each other out a lot more than they do today, says Dick

Darwin was destroyed by Cyclone Tracy on Christmas Eve in 1974. That date marks a mass exodus from the northern outpost when people were evacuated by planes to all points south of the disaster. While others drove out if they had an undamaged vehicle, a few endured and lived a poverty-like existence to guard the few meager belongings they had left, mostly in makeshift shelters under the ruins of what was once their homes. The remaining few did it hard that wet season as the monsoon dumped almost two metres of rain on Darwin after Cyclone Tracy. There was little work because of the exodus and when the federal government decided that the best option was to bulldoze all the dwellings in the badly damaged suburbs,

those who remained were told to pack up and get out.

The wet was all but a memory on the 1975 Easter weekend. It was time to head into the Gulf to fish what remained of the run-off season and catch a few barramundi. Thus the Brummell and Eussen family were on the Barkly Highway to Gregory Downs looking forward to the long weekend. Just before the Torntonia Station turn-off to Burketown, we were waved down by a motorist who had only three tyres left on his Valiant. He had already blown the spare and was stuck. His wife and three children, plus all their belongings had put a lot of stress on the tyres.


It turned out they had been forced to leave their damaged Darwin home by the authorities. The top of it had simply blown

away; packing what they could they headed south for Brisbane. The plan was for one of us to turn back to Mount Isa and get a couple of tyres to get the family back on the road, but as things were done in those days a couple of beers before heading on the 200km round trip were in order. In the meantime the kids from the combined three families were having a whale of a time in the surrounding bush.

My young bloke, Richard, turned up out of the scrub rolling a tyre on its rim that he had found. Partly flat and covered in grass, the tyre was fatter than the ones that their Valiant wore; but the rim was the same size! That was incredibly lucky as not that many Valiants roamed about the country.

Us men took turns to pump the tyre with a foot-pump as 12V

air compressors had not been invented yet. The bloke (I have long forgotten his name) was almost in tears as he handed me a new workshop vice in Darwin as thanks. He told me that it was just about all he had in the world. I handed him a \$20 note, a lot of money in those days, but vices were not cheap either, so it was money well spent, and more importantly it would have gotten the family a long way towards getting to their Brisbane destination.

I always remember that incredible stroke of luck finding a good tyre and rim that just happened to be laying in the bush, overgrown with grass, but ready and able to get a cyclone family back on track. That was the way we did things in the bush in those days, we were always willing to lend a hand. 



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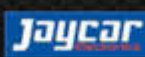
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GET MORE OUT OF EVERY TANK



How to fix high fuel consumption for good

WORDS BY STEVE COLLINS, PHOTOGRAPHY BY 4WD ACTION →

Picture this, you've just bought a bog stock 4WD and you're getting 14L/100km. After a few mods your economy has blown out to 18L/100 and you don't know why – sound familiar? Most owners think poor fuel economy is the price we pay for driving a modified 4WD. Luckily, it's not the case. These days you can have your off-road cake and eat it, too.

The first, and probably the most common culprit is larger tyres. Stepping up from 31s to 35s is a huge leap, and it's not uncommon to think you're getting worse fuel economy as a result. But here's the kicker – for the most part, you're not actually losing a heap of fuel efficiency; you're simply not registering all of the kilometres you drive.

Take upgrading from 31s to 35s as an example. If our maths is right; that's a 12.9% increase in overall circumference. Because your odometer works off revolutions, one revolution of a 35in tyre is 12.9% more than a 31in tyre. So when your odometer says you've driven 100km

(remembering it's calibrated for 31in tyres), with 35s you've actually driven 112.9km. In fuel usage terms, if you started off with 31s getting 600km out of a 90L tank, you'd have started with 15L/100km. Now with 35s muddies (still on factory gearing) it's totally normal to be getting only 520km or so out of a tank. While there are very slight losses caused by the increase in rolling resistance of the larger tyre, you're not actually using as much more fuel as you first think, you're just not registering all of the kilometres you drive. The fix is to regear the diffs to suit the larger tyres so your odo reads true, or work out how much bigger your tyres are and factor it in to your calculations each time you fill up. For many popular 4WDs, you can buy a speedo correction box from someone like Marks 4WD Adaptors that will recalibrate your speedo once you input what size tyres you're running.


What about performance modifications like a chip and exhaust, or turbo upgrade – surely they'll use more fuel? For the most part, if an engine is making

more power it's said to be more efficient. Each explosion during the power stroke packs more punch, and in-turn creates more torque. The key here is torque, because it's the engine's ability to make torque that enables it to turn the tyres.

With more torque on tap, you don't need to squeeze the skinny pedal quite as hard to get going. And post-performance upgrade fuel economy all comes down to how you use that new found power – if you drive like Colin McRae, of course the engine is going to use more fuel. But if you drive it like you always had; accelerating smoothly rather than revving the guts out of your engine – you'll find you use less fuel than you ever had.

What about lift kits and roof racks? How much of an effect does the aerodynamics of your 4WD have on your fuel consumption? In short, a lot! Your best bet if super-low fuel economy is your aim is to keep everything low. Wind drag plays a huge part in opposing forward momentum, and it gets worse the faster you go. Testing we've done in the past

has shown improving the airflow over the top of your 4WD can save over 1L/100km. Of course, no one expects to remove their lift kit or roof rack. With your lift kit, consider how much driving you'll be doing at highway speeds. If it's a lot and you rarely see a weekend crawling up gnarly rock steps or battle deep ruts, then you probably don't have a need for a big lift anyway. You'll get 35s under a Patrol or Cruiser with a 2-3in lift, so any higher is only going to cost you more in fuel consumption. The same goes for packing your roof rack. Day-to-day; leave the swag at home in the shed, and when you do pack for a trip, strap it down low and at the back of the roof rack instead of up front. Anything you can do to reduce the front surface area of your 4WD, the more you'll save on fuel.

If you're still not convinced here's a real-world example. My turboed TD42 GQ has had a huge boost in power, runs a 4in lift and 35in muddies – and still returns 12L/100km every day (even less on the freeway). If this 2.5t brick can return figures like that... yours can too! 



\$145 saves \$8000 diesel rebuild!

Most Japanese diesels gunk up well before they wear out. Just look how filthy the oil can get. As soon as it stains your fingers, it has no ability to keep the engine clean. This happens because the oil gets completely saturated with soot, leaving the oil with no ability to keep the critical piston ring area clean.

When this happens, you'd think it was worn out, and that's when people waste \$8000 or more rebuilding their diesel. Little did they know that for \$145 they could have restored it to proper operating condition.

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developed the solution. We now save more engines from the scrap heap than anyone else in Australia" says Brid Walker, founder of CEM.

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G'DAY KIDS CAPTAIN CHAOS HERE!

Graham has convinced the guys to come on another adventure. This time he needs your help to battle through Victoria! You can help him by completing this issues maze. I also added a "Spot the Difference" photo where you need to circle the bits missing from the photo. When you're done head to www.4wdaction.com.au/kidscorner for the answers. Don't forget to let me know how you went with it and get your mum or dad to take a photo of you next to your 4WD or draw me a picture of your favourite 4WD so we can all see what you go bush in! While you have your thinking caps on, don't forget to write me a few words telling me what you go bush in and where you've been!

On'ya kids!

KIDS,
SEND IN A PHOTO
OF YOURSELF AND
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Due to the enormous amount of mail I receive, I can no longer send all of your letters back to you, so please take a photo or scan it into your computer before you send it.

ON YA, KIDS!

HEY KIDS! HOW WOULD YOU LIKE TO WIN AN AWESOME HEMA KIDS ATLAS AND PUZZLE?

Now you can help your parents plan your next trip. Every lucky person who gets their letter published scores a beaut Kids Travel Atlas and Children's Map of the World puzzle, so make sure you write in to the magazine for your chance to win! Don't forget to add your contact details and parents' phone numbers so we can make sure we get the prizes to you. Now you can start exploring Australia with your very own Hema atlas!

**NEW
PRIZES!**



BAILEY BRYCE

"This is one of my favourite shots taken from a recent six week father and son trip up the cape. In the photo we have my 8 year old son Bailey and our much loved HiLux. This shot was taken on the stunning beach at the Pennefather, just north of Weipa." - Brendon Bryce

G'day Brendon and G'day Bailey, thanks for sending that photo in, I reckon it is fantastic! How good are father and son trips? Particularly when you get to go to the Cape! - Captain Chaos



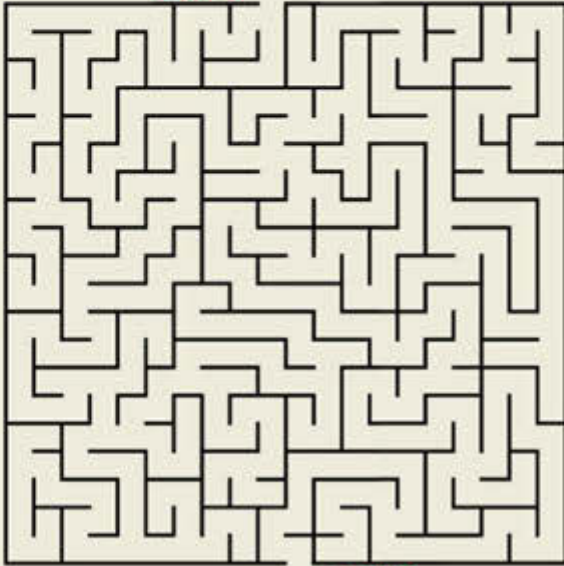
WHERE'S ORTO?

Keep your eyes peeled! Somewhere in this issue, Orto is hiding. We'll give you a clue - he's hiding somewhere near a cool custom 4WD. If you can find where he is, jump onto www.askorto.com and send him an email with your name, address, phone number, and which page you think Orto is. The winner this issue will receive a Thumper air compressor worth \$149 for your mum and dad's 4WD!



CAPTAIN CHAOS'S MAZE AND SPOT THE DIFFERENCE

START



FINISH

ELLIS DENTON

DEAR CAPTAIN CHAOS,

"Ellis and his dad Wayne love the mag and DVD," Writes Jenna. "They buy every edition. His dad works long hours on a cray boat so the DVD is something that gives them some time together. Ellis has a real interest in 4WDs and since he was two he could explain everything about them. He loves building 4WDs out of Lego and driving his 12V 4WD around the yard." - Jenna Denton

G'day Ellis, you've made such a cool 4WD there, I can't wait to see your next creation! It's good to hear you love watching the DVDs with your dad and I am sure you'll enjoy watching Graham in Victoria this issue! - Captain Chaos



ASHA AND RYLEE FOTHERGILL

HI CAPTAIN CHAOS,

"This is a picture of our two girls Rylee & Asha, trying to get a bit of flex," writes Bec. "Asha was diagnosed with Acute Lymphoblastic Leukaemia in 2013. During her most intense treatment we were required to travel 600km a week, which as you can imagine took its toll emotionally and financially."

Although Asha still receives chemotherapy, she is stoked to be able to get outside and get dirty again. The girls love nothing more than going out in Daddy's truck on the weekends to find some mud. It's a great way to spend quality family time and we hope the girls continue their love of 4WDing. - Bec and Shaun

Hi Asha and Rylee, what an awesome photo! I bet you love your little 4WD. When you're a bit older do you think you'll get yellow trucks to match this one? Make sure you keep in touch - next time send in a picture of you in your dad's truck! - Captain Chaos

SPOT THE 10 DIFFERENCES

After you have circled all of the missing bits from the photo and completed the maze, get onto the computer and click on www.4wdaction.com.au/kidscorner to see how you went.



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NEW PRODUCTS

Got a new and exciting 4WD product that you'd like to tell the world about?

We're always on the hunt for new and exciting 4WD products to review or write about in 4WD Action magazine. It doesn't matter how big or small your product is, if it's new – we want to hear about it and so do Aussie 4WDers!

How do you get your product featured? Simply send us an email with a brief description and good quality image of your product to products@4wdaction.com.au.

OFF ROAD DESIGNS RAPTOR RACKS

Traction aids are becoming increasingly popular amongst 4WDers these days, and it's pretty easy to see why. Having a quick and easy solution on hand in a recovery situation can often mean the difference between a successful recovery and a disaster.

Off Road Designs has recently come up with the Raptor Racks mounting system for the MAXTRAX MKII. It incorporates an easy fit kit, is made from super light and tough as nails materials, and has quick release mounting pins. This means

you don't have to spend precious time fiddling with nuts and bolts while your pride and joy sits in that bog hole or halfway up to the silks in sand. The kit is also completely removable and can be mounted in a variety of different ways on roof racks or cages. Off Road Designs also make a mounting system for TRED boards.

Raptor racks are now available for \$109.95 and \$129.95. If you're keen to find out more head to www.4x4designs.com.au



OFF ROAD DOWNUNDER GENERATOR SLIDE

If you have just spent your hard earned on a new generator and want to look after it, chances are you would want to put it on a slide. That way you don't have to keep shuffling the generator around and risk it being damaged.

The Off Road Downunder Generator slide enables you to safely slide your generator in and out of your truck. No more lifting and moving, simply slide and start. While it was originally designed for a caravan, the slide can be easily bolted to the back of a 4WD.

The slide is specifically designed for the Honda EU20i, but will accommodate other brands of similar size. It comes with mounting holes, so you can safely bolt your generator down. This means that restraint straps aren't needed and provides a great level of security for your generator. Rated to 125 kilograms and built in Australia, this generator slide could greatly improve your camp setup when you're out bush.

The Off Road Downunder generator slide has a RRP of \$269.95. For more information head on over to www.offroaddownunder.com.au



TRANSGOLD RUBBER SUSPENSION RANGE

If you're due to replace any suspension bushes in the near future, then check out Transgold's range of rubber suspension parts. They currently stock 700 different part varieties, so they're almost guaranteed to have rubber suspension parts for your 4WD. Their products are designed as direct OEM replacements.

This means they perform in the exact same way as the factory bits, so you don't change how your 4WD rides.

You even get a one year 20,000km warranty on all replacement parts and they are available from most good auto parts suppliers.

For more information jump on to www.transgold.com.au or call (02) 9622 8850

ARKPAK 715 AND 730

A good supply of power is something we all need off-road. Whether it's for keeping your favourite bevy cold in a fridge, or a bit of extra light when you're cooking, the ability to charge and power your camping accessories is almost essential to any camping setup.

ARK Corporation has recently released the new ARKPAK 715 and ARKPAK 730. These little beauties are portable, which means you can have them exactly where you need them for powering your gear. They can even be charged through your 12 Volt vehicle socket.

The ARKPAK 715 packs a 150W inverter, USB, 12V sockets and even has an isolator switch to keep your stuff safe. The ARKPAK 730 boasts a 300W inverter, external battery terminals for charging and has its own battery management system.

The ARKPAK 715 is available for \$469 and the ARKPAK 730 for \$549

To find out more check out www.arkcorp.com.au or call (02) 9678 9036



ARKPAK 715



ARKPAK 730

OUTDOOR CONNECTION BURLY LUMBAR CHAIR

Sitting around the campfire in your camp chair after a cracking day of 4WDing and solving the worlds' problems with your mates has got to be one of the best parts about heading bush. Outdoor Connection's new Burly Lumbar Chair is a king size version of their popular lumbar chair which they have had in their product range for over 10 years.

It has a 160kg weight limit thanks to the 22mm diameter steel pipe framing and double layered polyester fabric. This ripper of a chair even comes with adjustable lumbar support.

To find out more about the Burly Lumbar Chair then head to www.outdoorconnection.com.au or give them a call on (07) 3715 8400. The RRP is \$89.90



WHOLESALE AUTOMATICS NISSAN PATROL CONVERSION

Wholesale Automatic Transmissions has just released their cracking new conversion kit for Manual to Automatic Nissan GQ and GU Patrol conversions. The kit itself is comprehensive. It includes:

- A full Auto to manual conversion using a modified 'Heavy Duty Extreme' Nissan auto transmission
- Heavy duty 'Nomad' Valve Body assembly to replace the standard GQ and GU Patrol unit
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- Complete genuine Nissan interior assembly conversion
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If you're interested in Wholesale's new conversion kit for the Nissan GQ and GU Patrol, then give them a call on (03) 9762 8004 or head over to www.automatictransmission.com.au



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SIAN JOHNSTON'S WRANGLER

"I just wanted to share my 99 TJ," says Sian. "I bought this truck completely stock about a year ago. Since then a lot of money and hard earned beers were drank with this build and it's not even close to being finished. The Wrangler has taken us through Wombat State Forest, Lerdergerg, through Macedon Ranges, up to Bonnie Doon through NSW, and back again. This year we're planning a huge trip to Tassie and this truck has never let me down, best thing I've ever spent my money on."

Sian Johnston, Sunbury VIC

WINNER



ANTOINET AND RONNIE'S GU PATROL

"Hi, we've just been on a 4WD adventure from Madura Pass to Israelite Bay in Western Australia," writes Antoinet. "My partner Ronnie & I drove the Nissan Patrol and a friend of ours rode his Suzuki DRZ400. We took the very overgrown Old Telegraph Track from the Bird Observatory to Twilight Cove. The Bilbunya Dunes were absolutely amazing, just like Twilight Cove and Toolina Cove. Here's a photo of our Nissan on one of the dry salt lakes near Israelite Bay and Ronnie and myself at Toolina Cove in WA."

Antoinet Glazema, via Email





DEAN PORTER'S CHALLENGER

"This was taken on my recent trip to Conondale National Park in Queensland," Dean tells us. "I've modified my 2010 Challenger for touring by adding some Bridgestone all-terrain tyres, a XRAY LED light bar and TJM XGS suspension. For my camping set-up I have also installed a Waeco CFX fridge on a fridge slide with an Arpkak for power, Featherlite roof top tent and awning, custom built rear drawers and cargo barrier. I'm hoping to complete a trip to Fraser Island early this year and hopefully another trip out to Birdsville later on in the year."

Dean Porter, via Email



MARK MAXTED'S HILUX

"Thought I'd send in a picture of my two week old HiLux getting dusty for the first time," writes Mark. "Gleesons Landing on Yorke's Peninsula, SA is a great camp spot that I've been going to for about 15 years, and now I get to bring my son along for his first sleep in a swag. The night was so clear that we didn't even have to roll out the awning. At present, the 'Lux is only slightly modified, with an ARB bullbar, HID spotties, GME radio, canopy, roof bars, the awning, and a Engel 60L sitting in the ute. Future mods include a roof basket, 2in lift, and soon I hope to get rid of those factory tyres and get some all terrains on there."

Mark Maxted, Adelaide SA



JACKSON CASHION'S DISCO

"This is my current 4WD bought two years ago locally in Tasmania," writes Jackson. "It's a '99 Discovery with a throaty 3.9 V8 under the bonnet. When I bought the truck it had already been modified for off-road but hadn't seen a lot of action yet. It had the powerful V8, coils all 'round and a decent set of Cooper STTs providing the traction. Since buying it I have toured Tasmania, some parts of Victoria, and have also ventured across the Nullarbor. I have set to modifying the Disco by conducting a top end rebuild with some good mates to combat a leaky head gasket. We've also built a custom rear bar and rock sliders, fitted steel rims, cut the guards and fitted the APT Fabrication flares. An alloy radiator and twin Falcon thermo fans keep her cool and my all-time favourite part - the straight through 2.5in exhaust."

Jackson Cashion, via Email

LACHLAN SOHN'S HILUX

"Hi, my name is Lachlan Sohn and I am 16 years old. I'm on my L's and I've just bought myself a little rig. It's my pride and joy and my number plate says it all (ILUBMUD). It's a 1985 Toyota Hilux with a 2.2L petrol 4Y. It's running a 2in lift with 31in muddies, and I just can't wait until I get to explore the tracks in the NT!"

Lachlan Sohn, via email



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OOOPS MOMENTS

"This is my mate Michael Gillies' truck," writes Jamie. "We did the Cape over four weeks in June of 2014, something like 7000km travelled. This particular spot was at Canal Creek as you come out north bound. This was not a chicken track, and although the steep white clay incline looked reasonably firm, that wasn't the case. As the left wheels dropped into the white mud hole the Defender fell to its side and we had to winch out. We strapped a tree diagonal to the driver's side to pull the truck down on four wheels and kept the tension as we reversed using both lockers to get out. There was some rear quarter panel damage and a bent exhaust tip. it matches the other quarter panel now!"

WINNER!
JAMIE NAPIER
VIA EMAIL



JAYDEN WEAVER
KATANNING, WA

"I just thought I'd edge in slowly to check the depth. Next thing the base gave way and, well, you get the picture... The worst part was getting pulled out by a HiLux." We've all been there Jayden, hopefully your carpet has recovered too.



"A couple of mates and I headed out to our usual local bog hole for an after work play session," writes Andrew. "We came across these young fellas that seemed to have found themselves bogged in the stink-water with no way of recovery. We made them dig out and remove the towbar gooseneck so that we could attach a snatch strap and tug them out. It made for a funny afternoon as the jokes were coming thick and fast." Lucky you came along Andrew, wonder what their plan was if you didn't?

ANDREW COSTA
VIA EMAIL



We've all been there, so show the world your best 'Oops' moment! It doesn't matter if you got yourself bogged because you thought the mud wasn't that deep, or if you ended up on your chassis rails after taking the wrong line through a

tricky section of track. If it made you say 'Oops!', then it belongs here on these pages!

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JACK METACLIFF
VIA EMAIL

"My oops moment was a few months ago when I had just purchased my 2004 Nissan Patrol 4.2 coil-cab ute," says Jack. "Some mates headed to the local powerline track at about 9pm and before long I had somehow convinced myself to try the first mud hole. Didn't turn out to be a good idea once my wheels were spinning on the bottom and water started to come in. My mates took their time to hook up the snatch strap just to rub it in."

"This was the result of exploring Bruny Island's forestry and logging areas in my very first 4WD," writes Jackson. "Shortly after driving into this track I realised the remainder of the track would not be passable in my mildly modified Pajero. The hitch came when I went to turn around and I started sliding off the track down an embankment towards the trees. Unfortunately I ended up resting against this tree while trying to get out. At this point I had to ring my Dad who was working down on the island at the time and had a well-equipped work 4WD. When he tried to get close enough to pull me out he also ended up sliding down the bank. He winched himself into a better position and recovered me easily. I ended up with some panel damage and a damaged ego!"

JACKSON CASHION
VIA EMAIL



OUR OOPS MOMENT

In this issue's Epic DVD trip Graham put our rebuilt GU through its paces, and as you can see he wasn't holding back. The exit on this mud hole proved too steep and the GU came to a stop on its chassis. So out came the Domin8r to pull him out, no trouble. Graham must really be missing Shorty's ramp-over angle!



LUKE MCTACKETT
VIA EMAIL

"A mate and I thought we would kill some time through the day by taking my Isuzu D-MAX out for a run in the bush," Luke tells us. "After traversing a fairly ordinary track we came upon a steep, slippery incline. We walked the track first to pick our line as I don't have a winch yet, then having attempted to climb the hill a few times unsuccessfully, I put it in second gear low range and gave it the berries. It cost me a tyre but luckily that was all. After a quick tyre change, a new strategy and the use of my MaxTrax, we got up the hill safely. I think I'll invest in a winch now but it definitely was my 'oops moment'!"

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